Moderny

ITHOGRAPHY

APRIL - 1955 - VOLUME 23 - NUMBER 4



Senelith Inks

Were the first lithographic inks made from dyestuffs

treated with sodium tungstate

for better sunfastness

and are still leading

with their outstanding resistance properties

Our booklet "Inks, Lithographic and Printing" may be obtained on request

The Senefelder Company, Inc.

"Everything for Lithography"

32-34 Greene Street New York 13, N. Y.



FREE ... on all future deliveries to our customers:

R&P'S NEW DOUBLE-STRENGTH LACED ENDS PROVIDE STRONGER DRAWSTRING TENSION

, assuring trouble-free, tighter,

rounder, truer, longer-lasting,

more economical dampener

roller covers.

R&P's new double-strength laced ends save time, money, down-time, and production headaches . .

They've been tested.

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Like the difference between sow's ear and a silk purse, R&P's new double-strength laced ends are a far cry from tieing by hand, sewing by hand, or even the first machine-laced ends . . .

R&P's new double-strength laced ends provide the strength for maximum drawstring tension necessary for trouble-free, efficient and economical dampener roller covers.

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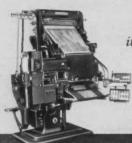
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ALL ORDERS SHIPPED FROM THE R & P OFFICE NEAREST TO DESTINATION

What top
printing executives
say about

Fotosetter

Men who know most about it are those who produce and use type on film for quality printing. Here is what they say about the Intertype Fotosetter photographic typesetting machine and its product. Every statement is a matter of record.



If it isn't made by Intertype, it isn't a Fotosetter "Fotosetter gave me quality I didn't think was possible in offset work."

John Begg, Production and Art Director, Oxford University Press, New York, N. Y.

"We wanted to get the best quality of type possible and there is no doubt that Fotosetter gave it to us."

Douglas Black, President of Doubleday & Company, Inc., New York, N. Y.

"The Fotosetter will give us greater flexibility in our planning and designing. We are no longer restricted by limitations of type and page sizes for many of our special and very important books. We can arrange our illustrations in almost any manner without increasing plate costs."

Burton L. Stratton, Production Manager, Harvard University Press, Cambridge, Mass.

"Our conventional typesetting equipment still accounts for a good share of our business, and we will continue to depend on it. But phototypesetting is definitely the answer for many jobs, and you've got to move with the times. We're still proud of some of the work we did in our earliest days in 1922, but in today's market that work would be as out of step as a hand crank in a Cadillac."

H. J. Echele, President of Warwick Typographers, Inc., St. Louis, Mo.

"Almost every job coming to your plant for processing has areas of production which are not possible by conventional methods. We have found that our dollar billing on many jobs has increased by as much as 150% because we can provide a complete range of photographic services."

W. E. Trevett, President of Cooper & Beatty, Ltd., Toronto, Canada

Specimens below illustrate the quality, flexibility and some of the profitable uses of Fotosetter photographic typesetting.

lovely lingerie in nylon tricot

5-A—"Pleated Magic" Slip with beautiful trims of nylon lace and permanent pleats. Choose from a rainbow of colors, including white, pink, blue, red, brown, black or beige. 32 to 42. 5.95. 44 to 46. 6.95 Matching petticoat, small, medium, large . 3.95 Extra large . 4.95

ivating camisole bodpetal green, red or8.95



WELL NOS.

HUMBLE PIPE LINE COMPANY RUN TICKET

TANK NO.

GAUGES FEET
OPENING
CLOSING
B. S. & W.

Mr. and Mrs. Lamont Harold Munson

request the honour of your presence
at the marriage of their daughter

Mary Anne

Mr. Robert Slenn James





bands, and the spaces between them. Design, with them, in other words, etembed in domain to the spaces between forms.

This new type of sock has been eshilated in sodipute shoots, have excived enjoins publicits: as a new development and attracted an ever-increasing number of humor and decovers. Some of the latter know the dissiplines and some, as usual, have not even begun their hearings Result, therefore, have ranged from good through indifferent to the had of choos. And—incredible to relate—one of the latter, in March of 1973, soon the Grand Physic in the international sudputer competition on the there. The Unknown Political Prisoner," sponnered by The Institute of Contemporary Ave of London See Fig. 3.

To test the presence or absence of that basic requirement of the art of sculpture—form design—compare Fig. 3 to the Stone Age drawing of Fig. 1. The latter has a self-contained, recognizable symbolism that any

FOUNDATIONS 27



Intertype Corporation

360 Furman Street, Brooklyn 1, N. Y. Chicago, San Francisco, Los Angeles, New Orleans, Boston In Canada: Toronto Type Foundry Co. Ltd. Toronto, Montreal, Winnipeg, Vancouver, Halifax

Fotosetter registered TM. • Fotosetter Century Schoolbook and Futura





THE COVER

A familiar sight to metal decorators—sheets of lithographed metal plate used to make cans come out of ovens at an American Can Co. plant. Sheets are baked for 10-15 minutes at temperatures ranging from 275 to 400 degrees F. Turn to page 68 for a story on Canco's production of beer cans.

WAYNE E. DORLAND

RALPH E. DORLAND

Advertising Manager

CHICAGO OFFICE 333 North Michigan Ave.





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MODERN VOLUME 23, NUMBER 4

LITHOGRAPHY

APRIL, 1955

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Address all correspondence to Box 31, Caldwell, N. J.

a new concept in

<u>offset</u> inks..

DYNASES

From the famous S&V laboratories, comes a new and different concept in ink for offset presses . . . quick-drying DYNASET. This unique S&V product combines the skill and experience of S&V's staff of technicians with their expert knowledge of modern synthetics. New in its field, DYNASET offers the lithographer an improved press-ready ink that performs better than any other . . . a press-stable ink that will not cake or dry on the rollers . . . a high strength ink that insures better halftones and highlight



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Sinclair and Valentine Co.

Main Office and Factory, 611 West 129th St., New York 27, N. Y.

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Whether you order Nekoosa and Ardor Papers in stationery sizes or larger sheets, you'll like our new cartons. Just a pull of the string or tear-strip and off comes the top! Another Nekoosa convenience!

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there's no paper like

COTTON PAPER





"When a printing job requires extreme durability, as well as crispness and brightness, we recommend a cotton paper," says Arthur A. Wetzel, President of Wetzel Brothers, Creative Printers and Li-

thographers, Milwaukee, Wisconsin, and Past President of the Printing Industry of America.

"A good example is this Milwaukee Braves baseball schedule, lithographed by us for a Milwaukee advertising agency. Pocket-wallet size, it had to withstand a whole season's handling . . . a tough assignment in baseballwild Milwaukee. We used beautiful creamwhite Fox River 100% Cotton Anniversary Bond . . . and while the umpires toss out over 3,000 scuffed, unplayable balls during the Braves' season, we have yet to hear of one of these schedules being worn out by a fan."

FOX RIVER PAPER CORPORATION

Appleton, Wisconsin

Check this list for new ways YOU can use Fox River Cotton Papers!

uses other than letterheads, matching envelopes, office forms, etc.

SPORT SCHEDULES . . .

100% Cotton Anniversary Bond and Ledger for long, rugged treatment, economy of space, ease of printing in one or more colors, small and large type . . . football, basketball, hockey, hunting, fishing.

ANNUAL REPORTS ...

For dignity and prestige, 100% Cotton Anniversary Vellum for body stock, Anniversary Bristol for the cover. For fine print, graphs, halftones, solids. For lithographing, embossing, engraving.

DIRECT MAIL . . .

Cotton Bonds, Onion Skins, Vellums, Bristols and Thin Cards in matching shades of cream white and blue white for every budget . . . for an integrated program of direct mail letters, inserts, folders, post cards, announcements, calling cards, envelopes.

PRICE & PARTS CATALOGS . . .

100% Cotton Anniversary Ledger for smooth printing surface for fine lines, halftones, solids - durability under constant handling.



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How many of these uses are YOU suggesting to

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COUNTER SIGNS
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SIGNS
BACK-BAR PIECES
CASH REGISTER
SIGNS
TRUCK SIGNS
SHELF STRIPS

DISPENSER
POCKETS
SIGNS BEHIND
GLASS
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IDENTIFICATIONS
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DIRECTIONS
OIL CHANGE
TICKETS



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Write TODAY

for your FREE KLEEN-STIK IDEA KIT of samples that help you sell!

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Headquarters for ALL Your Film and Dry Plate Requirements

Ansco

To get the right photographic material—
right when you want it...call the Pitman
office nearest you. The make, the type,
the size you need to help you meet
your production schedules. Pitman's
day-in-day-out inventory control
assures you of fresh material—
in stock at all times.





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New York 36, New York — 230 W. 41st Street
Boston 10, Massachusetts — 266 Summer Street
— The Pitman Sales Co.



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*You'll like the photographic characteristics of the Reprolith Ortho emulsion on vinyl base—among them high contrast and good orthochromatic sensitivity.

PUT AN END TO YOUR

If you haven't applied the outstanding advantages of Ansco Reprolith Ortho Vinyl Base Film to work in your shop, do so today and learn for yourself how it will help your operation.

ANSCO, Binghamton, New York. A Division of General Aniline & Film Corp. "From Research to Reality."



MODERN LITHOGRAPHY, April, 1955



MERCURY PRODUCTS

make tough jobs easy MERCURY MIKE



The most complicated makeready, the heaviest forms, and trickiest vignettes all become far simpler to handle—when you have the *right* rollers and blankets for the job. And "right" means "MERCURY" every time! Tame your tough assignments with MERCURY Rollers and Blankets.

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Eastern office: 800 McCarter Highway • Newark, New Jersey



PRESS	SHEET SIZE	SPEEDS UP TO	
29 Single Color	23 x 29	7000	
36 Single Color	23 x 36	6500	
41 Single Color	30 x 42	. 6800	
41 Two Color	30 x 39	6800	
49 Single Color	36 x 49%	6500	
49 Two Color	36 x 49%	6500	
61 One to Five Color*	42 x 58	6500	
76 One to Five Color*	52 x 76	6000	

The Miehle 61 and 76 Offsets are built on the Unit Construction principle and are available as one, two, three, four, and five color presses.

The Michle

Leader
among the world's
manufacturers of
fine printing equipment.



Trade Events

Packaging conference and exhibition, April 18-21, Chicago. Conference at Palmer House; exhibition at Chicago Amphitheatre. American Management Assn. National Assn. of Litho Clubs, annual convention, May 6 and 7, Schroeder Hotel, Milwaukee.

Technical Assn. of the Graphic Arts, annual meeting. Boston, May 9-11, 1955, Somerset Hotel.

Research & Engineering Council of the Graphic Arts Industry, annual meeting, Parker House, Boston, May 11-13.

Southern Graphic Arts Assn., annual convention and exhibit, May 26-27. Hot Springs, Ark.

Lithographers National Assn., annual convention, June 20-23, Lake Placid Club, Lake Placid, N. Y.

nternational Assn. of Printing House Craftsmen, annual convention, August 7-10, Netherland Plaza Hotel. Cincinnati.

International Association of Printing House Crafts-men, Inc., annual convention, Aug. 7-10, Hotel Netherland Plaza, Cincinnati.

Screen Process Printing Association, Internation annual convention, Sept. 10-14, Atlantic City.

National Assn. of Photo-Lithographers, annual convention and exhibits. September 21-24, Statler Hotel. Cleveland.

Litha Schools

CANADA—Ryerson Institute of Technology, School of Graphic Arts, 50 Gould St., Toronto, Ont. Canada.

CHICAGO—Chicago Lithographic Institute, Glessner House, 1800 S. Prairie Ave., Chicago 16, III. CINCINNATI—Ohio Mechanics Institute, Cincinnati,

LOS ANGELES—Los Angeles Trade Technical Junior College, 1646 S. Olive St., Los Angeles 15, Calif. MINNEAPOLIS—Dunwoody Industrial Institute, 818
Wayzata Blvd., Minneapolis 3, Minn.

NASHVILLE—Southern School of Printing, 1514 South St., Nashville, Tenn.

SOURT St., NEW YORK—New York Trade School, Lithographic Department, 312 East 67 St., New York, N. Y. OKLAHOMA—Oklahoma A & M Technical School. Graphic Arts Dept., Okmulgee, Okla.

ROCHESTER—Rochester Institute of Technology.
Dept. of Publishing & Printing, 65 Plymouth Ave.,
South Rochester 8, N. Y.

PHILADELPHIA-Murrell Dobbins Vocational School, 22nd and Lehigh, Philadelphia, Pa.

PITTSBURGH—Carnegie Institute of Technology. Dept. of Printing Administration, Pittsburgh.

SAN FRANCISCO—City College of San Francisco.
Ocean and Phelan Aves., Graphic Arts Department.

ST. LOUIS—David Ranken, Jr. School of Mechanical Trades, 4431 Finney St., St. Louis 8, Mo. VANCOUVER-Clark College.

WEST VIRGINIA—W. Va. Institute of Technology. Montgomery, W. Va.

Trade Directory

Lithographic Tech. Foundation Wade E. Griswold, Exec. Dir. 131 East 39 St., New York 16, N. Y.

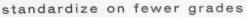
National Association of Photo-Lithographers Walter E. Soderstrom, Exec. V. P. 317 West 45 St., New York 36, N. Y.

Lithographers National Association W. Floyd Maxwell, Exec. Dir. 420 Lexington Ave., New York 17, N. Y.

National Assn. of Litho Clubs Frank H. Mortimer, Secy. 5917 33rd St., N. W. Washington 15, D. C.

Printing Industry of America James R. Brackett, Gen. Mgr. 719 15th St., N. W. Washington 5, D. C. International Assn. of Printing House Craftsmen P. E. Oldt, Exec. Sec'y. 307 E. Fourth St., Cincinnati 2.

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Since the cost of paper is about one-third of the job, you cannot make a successful bid if you pay high prices for small quantities of paper. But if you standardize on fewer grades of paper and buy them in larger quantities, the money you save can be passed on to your customers in the form of lower bids.

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For your salesmen, Neenah offers a fast-moving line of quality papers that are nationally advertised.

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- •3 Keys to Selection and Use of Thin Papers
- Your Guide to Better Indexing
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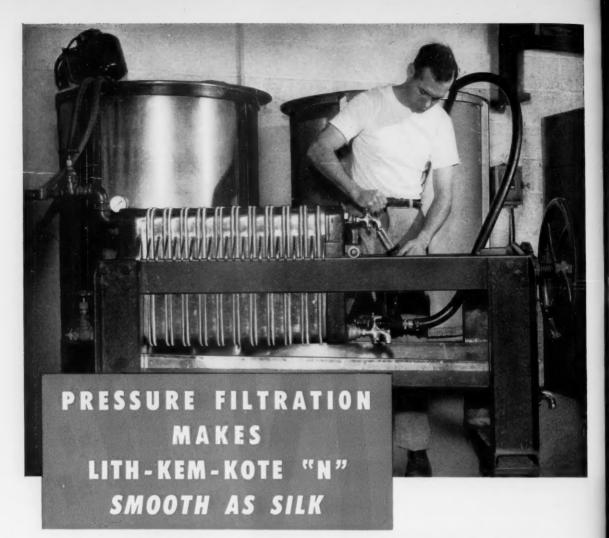


NEENAH PAPER COMPANY,



Neenah, Wisconsin

MODERN LITHOGRAPHY, April, 1955



To get a good surface plate, the coating must be smooth, clean, easy to spread, and above all it must adhere to the grained surface under all press conditions.

LITH-KEM-KOTE "N" is such a coating because it is made under exacting controls and laboratory tested before it is shipped.

Lithographers who use LITH-KEM-KOTE "N" every day report that it has these advantages:

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- * Long runs of matchless reproduction either line or halftone.
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- * Added economy (see prices below)

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1	quart		٠					\$1.75
1	gallon							6.50
4	gallons,	pe	rg	gallo	n			6.25
12	gallons,	pe	rç	gallo	n			6.00

Prices slightly higher on West Coast

There's a new LITH-KEM-KO Catalog ready. Send for your copy today.





print, by any method, on Beckett Hi-White. Type looks sharper . . . blacks look blacker . . . colors look deeper toned . . . finest details of the original artwork are preserved. The paper itself is startlingly white, but with a roseate undertone that produces — for the first time in a sheet of paper — the effect of whiteness with warmth. For details of sizes, finishes and weights, see other side.



Available in four standard basis weights—60, 70, 80, and 100 lbs., and in four popular sizes.

In addition to Smooth Vellum, Beckett Hi-White can be supplied in a variety of fancy finishes.

IMPORTANT NOTE. To provide a companion cover for Beckett Hi-White, we have added Hi-White Buckeye to our famous cover paper line. This is in addition to the standard white now regularly furnished in the Buckeye Cover grade.



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Makers of Good Paper in Hamilton, Ohio, Since 1848

Cut Plate-Making Exposure Eime

RAFARC Fully Automatic High Intensity Arc Lamps

- * Uniform coverage of large
- * Constant color temperatures.
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- the Shows Team * Accurate control of densities, regardless of line voltage variations.
- * Sharper reproduction.
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- Power to punch through dense Kodachromes.



GRAFARC 140 AMPERE PRINTING LAMP



-with transformer and stand for use with vertical printing frames 40" x 50" and larger. Overhead model also available for use with horizontal printing frames.

GRAFARC 95 AMPERE STANDARD PRINTING LAMP



with transformer and stand for use with vertical printing frames under 40" x 50". Overhead model also available for use with horizontal printing frames. Burns in normal position, thereby avoiding smoking of reflector and preventing ash from depositing on surfaces in the light path. A 45° angle mirror redirects the light downward to the work area. Models, available for Monotype Huebner MH photo composing machines, assure precise control of intensity for accurate repeats.

CHALLENGER VERTICAL TRIM CAMERA ARC LAMP

Burns at 75 amperes and 23 volts at the arc. Light in weight. Readily mounted on the lamp support arms of any camera.

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Literature or Arrange for a

Demonstration

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LITHOGEM*

*IPI's HIGH COLOR-STRENGTH OFFSET LITHO INK

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Lithogem inks are more foolproof on the press... set faster with excellent binding qualities. And they hate water, reduce greasing problems to a minimum to make colors stay cleaner, stronger.

Compare Lithogem with the best regular and process colors you are now using. Ask your IPI representative about Lithogem.

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INDIAN ART OF THE AMERICAS

This dramatic example of Indian art, shown in IPI Lithogem colors, originally appeared as a symbolic design painted on animal hide by the Haida tribe. These Indians settled in the Queen Charlotte Islands of British Columbia, and like many of the semi-Arctic tribes of the North, they lived in skin and bark-covered tepees. Their clothing was tailored from skins. Their colorful decorations on the painted

hides reached a high degree of artistic excellence and symbolized the many myths and ancient ceremonies that enriched and added greater meaning to their primitive way of life.

Permission to reproduce the painted hide and descriptive material adapted from "Indian Art of the Americas", by LeRoy H. Appleton, was granted by the publishers and copyright owners, Charles Scribner's Sons.

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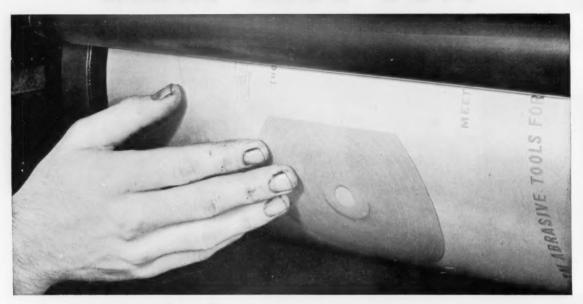
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PRINTING INK DIVISION . 67 WEST 44th ST., NEW YORK 36, N. Y.

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"3M" Offset Plates save time and money!

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QUICK FACTS about "3M" Plates:

- You can reproduce 300-line screen perfectly!
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- You get strength to spare—with half the care!

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	"3M"	Photo	Offset	Plates
at the		est-Selling Pre-Sensitiz		hoto Offset Plates
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Most holiday trips are launched from a printed page. In pictures and words, the lures of "green pastures" are reproduced in resort and travel promotion. When Oxford Papers are used, all the color, realism and glamor come through to the prospect. Your Oxford Merchant can show you successful examples.





For your next offset job







Wescar Gloss Plate Offset

OXFORD PAPER COMPANY

RUMFORD, MAINE + WEST CARROLLTON, OHIO

Wescar Gloss Plate is an offset paper especially manufactured with a light coating film and high gloss to give brilliance and detail to printed results. Its bright white color and smooth, even surface assure sharp, sparkling black and white and multi-color reproduction for the finest offset jobs.

PERSONAL PROPERTY OF THE PROPE

TWO VALUABLE AIDS



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Brubaker Paper Co.
Portland, Maine C. H. Robinson Co.
Portland Oragon Blake Moffett & Towns
Providence, R. I Blake, Moffitt & Towne Providence, R. I Carter, Rice & Co., Corp.
Providence, R. I Carter, Rice & Co., Corp.
Portland, Oregon Blake, Moffitt & Towne Providence, R. I. Carter, Rice & Co., Corp. Richmond, Va. Cauthorne Paper Co. Rochester, N. Y. Genesee Valley Paper Co. Sacramento. Calif. Blake. Moffitt & Towne
Richmond, Va

Mr. Edition Binder:

Your answer to the trimming of Smyth sewed books!

comal PUBLISHING COMPANY P PRILABOTA

January 10, 1955

Mr. David Schulkind, Pres. E. P. Lawson Company 426 West 33rd Street New York 1, N. Y.

Dear Mr. Schulkind:

The Rapid Trimmer which we recently purchased from you is now in full operation

The performance of the machine to date indicates that the close tolerances which we require are being met and at production speeds we doubted were possible.

If we can ever be of any assistance to you by showing this machine to any of your prospective buyers we will be only too glad to extend the same courtesies to you that were extended

I would like to express my thanks to both you and your men for your cooperation and assistance. It was greatly appreciated.

With personal regards, I am.

Edw. J biole

the

LAWSON automatic 3-knife

RAPID TRIMMER

tried, tested and accepted

over 100 in daily use.

Write Today for illustrated Folder on Rapid 3-Knife Trimmer also 39", 46" and 52" Cutters and Multiple Head Drill

E. P. LAWSON CO. main office: 426 WEST 33rd ST., NEW YORK 1.

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THIS IS NO TIME TO G

In the period that lies just ahead, it will be important that you know your costs. If you are to make a profit on your operation, you must know your costs. YOU CAN'T AFFORD TO GUESS what they will be - you'll have to KNOW. With the advent of the 35 hour week, in some areas, longer vacations, higher wages, rising costs of paper and other materials you use - your costs are bound to change and these changes will have a definite bearing on your profit. NAP-L will figure the hourly rates for your plant in the light of these changes and other operating costs as reflected in your specific plant — that's part of the service you get when you join NAP-L.



Don't strangle your profit with a lot of question marks - don't guess - write TODAY for information on how to become a member of NAPL.

WHY NOT MAIL THIS COUPON to:

COMPANY ADDRESS CITY ZONE STATE

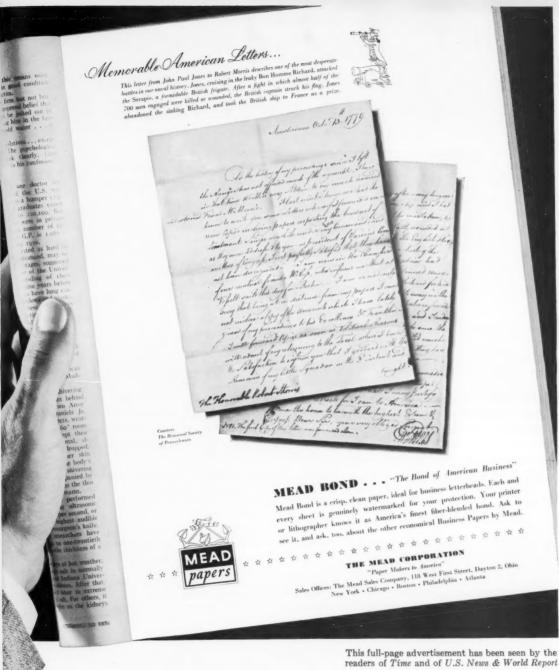
No. of Presses

NAME

317 West 45th St., New York 36, New York Gentlemen: Please send me complete information about

NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS

membership in the association.



This full-page advertisement has been seen by the

ADVERTISING THAT HELPS YOU SELL

Mead Papers mean business . . . for merchants, merchant-salesmen, printers, lithographers and advertisers. Making Mead Papers unforgettable in the minds of your customers—all who buy and specify paper products—is the job being done through our national advertising. Remember, Mead Papers mean business for you.

ut

WHY Siebold SAFETY INKS MAKE CHECK PRINTING DOUBLY PROFITABLE



YOU MAKE AN EXTRA PROFIT

-by printing the specially designed SAFETY PAPER that makes checks TAMPER-PROOF.

2.



YOU MAKE YOUR REGULAR PROFIT

on printing the face of the check.

What's more, when a Lithographer or Printer manufactures his own safety paper by printing plain stock with Siebold Safety Inks, he can offer his customers CHECK PAPER with distinctive individual pantograph designs—which offer an added protection against alteration by chemicals or erasure. Here is a sales tool that can help you win new customers and keep old ones happy.

EASY TO HANDLE—Siebold Safety Inks can be mixed with any litho varnish from No. 4 to No. 5. Never add dryers or boiled oil, as boiled oil is a drying oil.

COLOR FLEXIBILITY—If color is too strong it can be reduced by using Siebold's Sensitive White which is manufactured specially for this purpose.

NO SPECIAL PLATES REQUIRED—Use either albumen, deep etch or high etch plates, or electrotypes.

NON-SENSITIVE TO WATER—Siebold Safety Inks are sensitive to acid only. They can be run successfully from any type of lithographic plate or letterpress electrotype.

PRICES—\$3.50 per single pound, \$3.00 per pound in lots of 5 pounds or over FOB New York. One pound will print 5 to 10 reams of paper. This is based on a 22 x 34 sheet, printed 24 up, according to pantographic design. We will be glad to send you our color book of printed samples of Safety Inks available in 19 colors. Send for it today.

"OVER
A HALF CENTURY SIEBOLD FRENCH MOLLETON

30

MEMBER: Lithographic Technical Foundation— National Association of Printing-Ink Makers— National Printing-Ink Research Association— N. Y. Employing Printers Association.

G. B. Siebold INCORPORATE

PRINTING, LITHOGRAPHIC

AND SUPPLIES

150 VARICK STREET • (Dept. C) • NEW YORK 13, N.Y.

for plants where excellence is average

Empress

offset enamel

Watch a craftsman pick up a truly fine piece of offset work: He feels, he flexes, he peers — yes, he may even tear and taste . . . the paper.

For he knows that the greatest skill and finest materials are, at the last, finally and completely

dependent on one thing . . . the paper. Here they are enhanced and justified in a job that soars — and sings — and sells — or here they're dissipated and lost.

Empress Offset Enamel is made precisely for one purpose: to reflect faithfully the best in

photo-lithographic reproduction. Its consistently bright color and smooth surface treat fine screen

halftones, process and highlights to full advantage.

It is sized for heavy solids and gloss inks. And it's cut in sheets, one roll at a time, for accurate uniformity.

For your next fine offset job may we suggest that you try Empress. It's worthy.

A demonstration portfolio will be sent upon request.

The

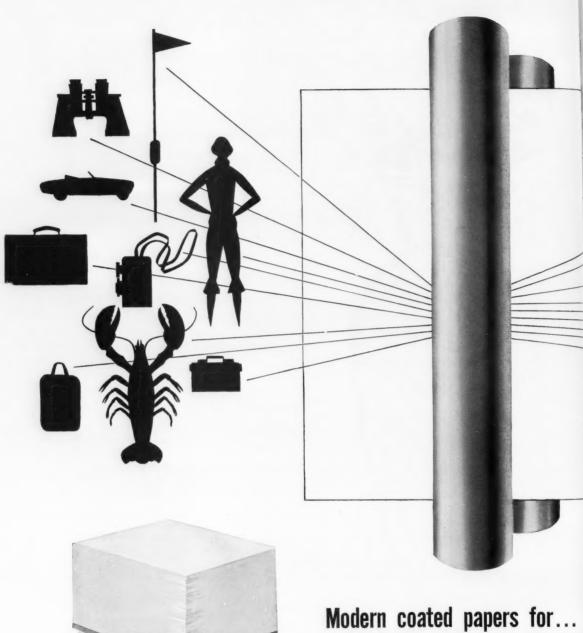


Appleton Coated Paper Company

1204 North Meade Street

Appleton, Wisconsin

Everything comes to life on



Kimberly-Clark Prentice Offset Enamel

Prentice is a truly modern paper, *engineered* to give outstanding performance with the newest techniques and inks, on presses new or old. From line to halftone, monotone to multicolor offset, Prentice gives you a sharpness and fidelity that only the most modern paper can provide.

Prentice Offset Enamel balances these fine reproduction

qualities with outstanding dimensional stability, uniformity, strength and all the other factors vital to top performance on the press and in the bindery.

Try Prentice and talk to your Kimberly-Clark distributor about the other outstanding papers listed below. You'll find you do your best on Kimberly-Clark stock!



Modern Lithography: Prentice Offset Enamel, Lithofect Offset Enamel, Shorewood Coated Offset, Fontana Dull Coated Offset.

Modern Letterpress: Hifect Enamel, Crandon Enamel, Trufect Coated Book, Multifect Coated Book.



Kimberly-Clark Corporation . Neenah, Wisconsin

AMA Schedules Packaging Show for April

THE 24th National Packaging Exposition and annual Packaging Conference are the big events the week of April 18 in Chicago, sponsored by American Management Association. More than 30,000 persons are expected for the two programs. Specialists in packaging, shipping, traffic management, and materials handling will meet at the Palmer House April 18-20 to discuss packaging problems and techniques. At the exposition in the International Aphi-

theatre visitors will tour more than three acres of exhibits.

The conference at the Palmer House has planned 15 sessions in three days with more than 40 speakers reporting the newest developments in packaging materials, machinery, and methods.

More than 380 exhibitors already have reserved more than 95 percent of the 140,000 square feet laid out for the Packaging Exposition at the Amphitheatre. The exposition will break a record set last year in Atlantic City, N. J., when 361 exhibitors occupied some 130,000 square feet of space. The attendance record was set in 1953 in Chicago, when more than 27,000 visited the Navy Pier.

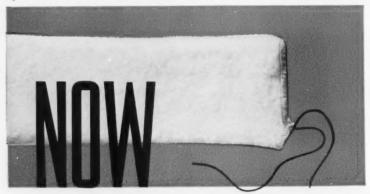
The show will be on display for 32 hours, compared to 26 last year. It will open at 10 a.m. daily.

The conference will open at 10 a.m., April 18, with a discussion of cost cutting in warehousing and materials handling. Representatives of Lever Brothers Co., Liggett Drug Co., and Sylvania Electric Products, Inc., will tell how they have improved their scheduling to coordinate production. packaging, warehousing, and materials handling. Four sessions in the afternoon will deal with packaging to increase hardware sales, standardization through central control, efficiency in packaging the multi-product line. and package testing. In the hardware discussion Stambaugh-Thompson Co. will describe customer likes and dislikes, inventory problems, and display space planning as they bear on packaging; Keystone Brass & Rubber Manufacturing Co., will report on the use of vacuum-formed plastic containers and other new developments; Socony-Vacuum Oil Company, Inc., will present a case study in standardizing packaging; and AC Spark Plug division, General Motors Corp. will report on increasing the efficiency of multi-product packaging scheduling.

Tuesday sessions will take up the packaging requirements of food supermarkets and drug and cosmetics merchandisers and some specific cost-reduction methods. Speakers from Wagner Electric Corp., Whirlpool Corp. and United States Radiator Corp. will tell how they are using accounting techniques, automaton, and concurrent design of product and package to reduce waste.

Packing and handling of bulky materials will be discussed by Dow Chemical Co. and Ternstedt division, General Motors Corp.

In another session titled "Know Your Materials" a panel of experts will evaluate functional properties of packaging materials supplying information on films, foils, paper, paperboard, and their combinations.



SEAMLESS DAMPENER COVERS IN ROLLER-LENGTH SLEEVES!

Save time and labor with factory-tailored lengths of

Seamol and Flanol

Seamol and Flanol, Jomac's seamless long-wearing dampener covers, are now available in lengths cut to fit rollers of all sizes. For Multi-lith or Davidson presses, drawstrings are sewn on both ends. Larger sizes are furnished with eyelets or drawstrings on one end. Whatever the size, these stretch-tested cut sleeves will save you the time otherwise lost in measuring, cutting and sewing.

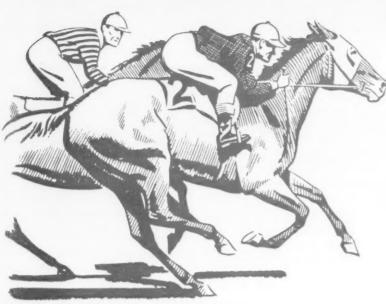
With white Seamol on top, and tough, all-wool Flanol underneath, you'll enjoy the perfect moisture control and fine reproduction that have made these two favorites with lithographers everywhere. Write today for free literature and price lists.

Break dampeners in and keep them clean with a Jomac Roller Cleaner



Dept. L-1, Philadelphia 38, Pa.

It's that "little Extra" which puts FITCHBURG PAPERS out in front



Fitchburg Parchment
Diamond-White Vellum
Fitchburg Vellum . .
Fitchopaque . . .
Fitch-Brite
Hillcourt Greetings . .
Hillcourt Offset . . .

Each of these merchant-distributed Fitchburg papers leads in its class. Each delivers extras in performance . . . in reproduction qualities . . . in value. For nearly a century the Fitchburg name has held a respected place in the field of fine papers for printing and lithography. These papers add to that reputation.

Write for complete information and sample sheets.



Established in 1861

Fitchburg Paper Company

MILLS AND GENERAL OFFICES: FITCHBURG 6, MASS.

NEW YORK OFFICE: 250 PARK AVE., N.Y. 17

MERCHANT SALES DIVISION
THIRD NATIONAL BANK BLDG., SPRINGFIELD, MASS.

PERFORMANCE RECORDS

help you choose the right PAPER

EVERY printing job is affected by many factors ...make ready, running time, condition of equipment ... often even the weather.

Paper, too, makes a difference. And now you can depend on the performance of paper. For St. Regis furnishes performance records that demonstrate what St. Regis papers have done... and will do

... on actual jobs.

Thus you know in advance that the paper will do its part. St. Regis papers come in a wide range of grades, for a wide range of jobs.

Here is an example. Here are the Performance Records of an actual job printed on St. Regis Sunbeam Offset.

RECORD

of the use of St. Regis 60lb. Sunbeam Offset

(Name of Printer on Request)

THE JOB

Advertising Broadside, 17" x 22" flat in 4 colors

QUANTITY

30,000 (9,000 sheets run)

SIZE OF SHEET

38" x 50"

FORM

Two up—four out on 2-color 42" x 58" Harris Offset Press

RESULTS

	Best Industry Standards	Sunbeam Perform- ance
Make- ready time	5.4 hours	5.1 hours
Impres- sions	3,257 per hr.	3,310 per hr.

WORKABILITY ADVANTAGES

Note how Sunbeam Offset bettered industry standards on two counts in this typical commercial job. Thus . . . this groundwood offset paper is an economical choice for volume runs.

The unusual bulk and opacity of Sunbeam Offset paper permit efficient use of lighter basic weights. Special pulps assure dimensional stability. Good brightness and color allow maximum contrast between ink and paper. Suitable for one color or multicolor lithography.

FOR AN UNUSUAL DEMONSTRATION
OF "FINE PAPER FOR FINE PRINTING"
SEND FOR A COPY OF THE
SUNBEAM PAPER DEMONSTRATOR, OR
ASK YOUR ST. REGIS REPRESENTATIVE.

St. Regis Printing Papers are manufactured by St. Regis Paper Company, one of America's largest paper manufacturers, with resources ranging from raw materials in its own forest preserves to modern mills and plants and nation-wide distribution.

> A WIDER RANGE OF GRADES for A WIDER RANGE OF JOBS

Enamel Printing Papers • Coated Printing Papers Uncoated Printing Papers • Uncoated Book Papers

St. Regis Paper Company

ST. REGIS PRINTING PAPERS ARE BACKED BY PERFORMANCE RECORDS



Sales Subsidiary: St. Regis Sales Corporation Printing, Publication and Converting Paper Division 230 Park Avenue, New York 17, N. Y.



THE graphic arts, one of the notable *leaders* in United States industry, has, unfortunately, been one of the notable *trailers* in spending money for research.

That fact has been duly reported by convention speakers in recent years, and needn't be labored here. Despite this bad showing on expenditures for research, the industry—and as a part of it, the field of lithography — has continued its impressive growth.

It would be difficult to determine exactly why. But a provoking statement by John H. Davis Jr., in a recent speech, disclaimed any credit for the graphic arts industry itself. The president of the Research and Engineering Council of the Graphic Arts declared that the industry could be proud of its growth, but went on to ask:

"But what has caused us to grow to the great stature we have achieved? We owe it to others. The need for us by other industries has made us great. Every type of industry and all phases of business need the printer. So, we must truthfully admit that we have been aided constantly in our growth by groups that are not aligned with us but, rather, are dependent upon us.

"... Through the years, while other great industries have made such remarkable advances in research and technological development, our industry (with some few exceptions) has been almost a 'do-nothing' group."

What is true for the printing industry as a whole, must be partly true for lithography, as a major segment of that industry. But one of those "few exceptions" which Mr. Davis mentioned happily is to be found in the lithographic field. It has done a

lot, especially since World War II, to mitigate the charges against graphic arts research.

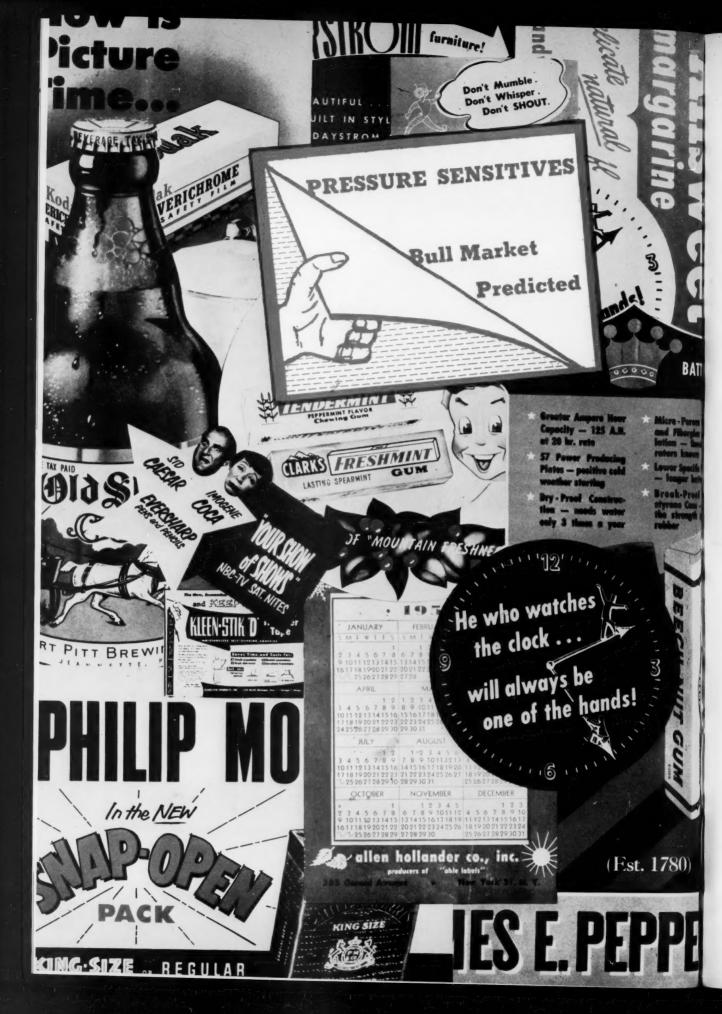
The Lithographic Technical Foundation, has developed an amazing amount of practical information that cameramen, platemakers and pressmen have been putting to use in their shops. A summary of last year's activities at the LTF laboratory is contained in this issue in an article reporting the recent annual meeting in Chicago. With LTF as a nucleus, graphic arts research, at least for the lithographic industry, is in good hands.

THIS is the season for graphic arts competitions. Competitions involving outdoor posters, folding boxes and, most important of all, the Lithographers National Association lithographic awards competition. The first two contests have been completed. The winners are reported and pictured in this issue. Entries have been received from lithographers all over the country for the LNA competition, but awards as yet have not been announced.

Publicity releases on the poster and folding box awards this year stressed the striking nature of the art work—innovations such as French artist Savignac's clever *Life* magazine poster—but they also went out of their way to give more than passing attention to the contributions of lithography.

Its excellent effects for large areas of color, sharpness of detail and flexibility came in for comment from the judges.

That's one of the nicest things about such competitions: They not only reward individual lithographers for quality work, but they also call attention to the whole field of lithography and the many advantages that can be obtained with it.



Pressure Sensitive Materials

Build New Markets for Lithographers

OURING on the coal" might be a good way to express the speed of development in pressure sensitive materials. Only a fledgling business 15 years ago, impetus for expansion came from a need to improve the time-weathered gummed tape products. The first major use of all-over pressure sensitive adhesive was in the production of oil-change stickers for automobiles.

Now, many national advertisers are customers of pressure sensitives in one form or another. Represented are companies with some of the most generous advertising budgets in the country—tobacco manufacturers, film makers, chewing gum producers, brewers, distillers, food processors, tire manufacturers, etc. One major producer of pressure sensitive adhesives opened his New York sales office three years ago and has experienced a six-fold increase in business in that city. Their 1954 jump over 1953 in New York was 60 percent.

Easily Applied

Substituting for decals and glue labels in many point-of-purchase displays, pressure sensitive adhesive material is easily applied by simply peeling off the protective paper backing and pressing on a hard surface. The next day's or next hour's promotion can be announced while the old advertisement is pulled cleanly away from the wall, window, board, can, metal plate, or plastic surface.

A number of standard sheet sizes and split patterns in various preprocessed papers are available to the lithographer. Adhesive can be applied to the face or back of paper, metal foil, metallized acetate, acetate, polystyrene sheeting, fabric, and many types of specialty papers such as extra-flexible rubber-saturated stock for outdoor displays, and heavy duty vellum finish stock for reverses and day-glo colors.

The application and use of pressure sensitive materials by creative



Automatic label dispenser removes protective covering and feeds label in a single motion. It holds rolls up to 10" diameter and widths to 5 inches. Maximum speed of dispensing is 120 inches per minute.

Photo courtesy Kleen-Stik Products, Inc.

lithographers helps round out the line presented to advertisers. It is in the last "eighteen inches" of the sale that these point-of-purchase advertisements do their work.

Pressure sensitive moistureless labels eliminate the messy handling usually accompanying water-soaked glue labels. They stay in position, require no drying time, and remain unaffected by daily temperature and humidity changes. They do not dry up, curl, or pop off, say manufacturers and users.

Problem Solved

A prime producer of tires and related products had been seeking a dependable label that would stick to the irregular surface of their battery cases. Regular water-remoistening labels loosen and fall off, due to the uneven strain. A colorful label, diecut in shield shape and listing the features of the battery was designed. Because of the simple peel-and-press application, the new labels save time and work, and stick firmly to the uneven contour of the polystyrene battery case.

California's Olive Advisory Board

got wide distribution of ripe olive recipes through simple tear sheet pads with pressure sensitive adhesive backing.

In the production of a plastic toy telephone, the manufacturer simulated the dial with a pressure sensitive die-cut label.

Label Problem

A packaging label problem was solved for a national pharmaceutical company in conjunction with a polyethylene squeeze bottle. Ordinary paper labels would not hold, but a specially developed pressure sensitive label proved to have sufficient flexibility and adherence.

Most runs are not long enough yet for web presses, with the exception of tapes. In many cases the press capacity exceeds the coating capacity; however, widths of 28-30 inches of pressure sensitive material are moving. Most of the point-of-sale jobs are going to the lithographer.

Psm (pressure sensitive material) paper backed, can be handled without difficulty on presses, the manufacturers say, and there is nothing unusual about running it. However, the thought of a double thickness of paper with a sticky material in between has cooled the lithographer on this product at times.

Accent on Litho.

The reluctance to bid on jobs for pressure sensitive papers has been primarily psychological, according to the producers of these materials. They declare that the litho salesman may want to sell this item; but if resistance comes from his production man, how can he confidently sell his customer? Suppliers emphasize that the simplicity of running "psm," together with the bright future predicted for these products should be important talking points when selling the litho (Turn to page 131)

How To Build an Offset

Plate Rack



1

Frames for all racks are made of 1" conduit or water pipe, bought in 10-foot lengths. Shown here is pressroom rack, 5x5x5' utilizing without waste the 10' lengths cut in half and welded together. Rack is large enough to hold plates up to 42x58". This rack and the plate room rack are fitted with center rail so that several plate sizes can be handled. Besides the full-width plates, 17x22" plates can be suspended the short 22" way, as shown. Double rails at each side, says Mr. Rhenke, give strength, help carry heavy load of a rack full of plates and protect plates from being struck. Extra rail is unnecessary on storage rack. Plates are drilled and $5\frac{1}{2}$ " suspension hooks of No. 9 gauge wire are attached and hung over rails. Designer Rhenke says plates are suspended at an angle so top edge is under sufficient stress by the plate's own weight to keep it smooth and straight during storage. This is one of the most valuable features of the rack design at Parthenon.

2.

Side view of rack shown in first photo, showing various plate sizes. Note cross bar supporting center rail.

YOU can build a set of offset plate racks in your litho shop that can be used to hold plates while they are being made and for permanent storage. Later on, you'll be able to put your hands on them quickly and without fumbling when it's time to get after those important repeat orders ("When You Run 'em Again—It Pays," January ML, page 30).

What's more, it won't cost you much to make the rack and it can be constructed very quickly. That has been the experience of Parthenon Press, Nashville, Tenn., which made just such a set of racks in its own maintenance department. That is probably one of the reasons why Parthenon, which installed its first offset units in 1952, now has the largest offset plant in the South.

Edward Rhenke, foreman of the plate room, who thinks "our racks are the best we can get" said he is happy to share with other lithographers his experience at Parthenon in building and using them. Three types of racks are used: for plates in the plate room while they are being made or prepared for storage; in the pressroom for plates on press; and in the storage room. Follow the Parthenon picture sequence to see how the racks are made and used and how they can be put to use in your shop.



3.

Storage rack for large plates. At present, Parthenon keeps three permanent storage racks in camera room. This rack is same height and width as others but is 10' long with supporting side braces in center. Middle rail is not needed because separate racks are used for large and small plates. Group of plates at right is being held apart pending rerun order, which is anticipated. As they become "dead", they will be regrained. For color or publication work requiring several plates, all plates are hung on one hook, saving space and guarding against mistakes or omissions.





4.

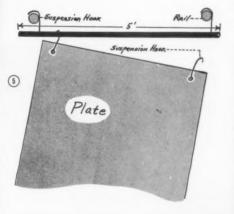
For storing small, 17x22" plates, this double-decker rack was built. It provides maximum volume in minimum amount of space. Spread construction at base adds stability. Rack is 10' long, 24" wide at tep, with single rail. Cardboard tabs on edges of plates carry the title or identification for each plate, with plates stored alphabetically along the various racks.

Don't:

- 1. Put rack on rollers or move it unnecessarily.
- 2. Attach printed sheets or proofs to plates in storage. Paper absorbs moisture which can damage the etched plate.
- 3. Overload rack. Add supports if needed.

5.

To remove plate, place rod, with hooks over the rails, alongside plate. The far suspension hook of the plate then is transferred to the rod while the other hook also is removed from the rack rail with the right hand. Plate is easily removed by letting the far suspension hook of plate slide along the rod. It can be returned by reversing this procedure. Mr. Rhenke and Lewis Akin designed the device.



Paper for Offset

PART 1.

Introduction

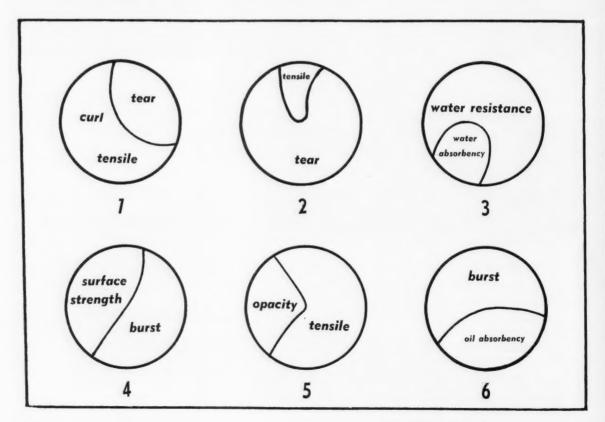
VER 90 percent of all types of paper for lithography is selected by the lithographer himself or from samples submitted to the customer by the lithographer."

This statement, based on results of a survey conducted by Modern Lithography approximately ten years ago, might be modified today to show an even higher percentage of paper selection done by the lithographer. The lithographer is an even more potent factor today in the choosing of paper grades than he ever was. The lithographer realizes that in selecting papers he must sacrifice part of one maximum physical property of the paper to gain an advantage in another. In offset printing, best results are obtained with paper made with a minimum of beating. Refining or beating the pulp causes gel-like bonds to form due to the hydration of the stock and maximum strength is customarily developed in this manner. However, the maximum strength developed by hydration promotes some of the most troublesome properties of

paper encountered in offset printing, i.e., high expansion, excessive curling, slow oil absorption as well as low opacity.

Some progress has been made in the past six years using synthetic resins in the manufacture of offset papers. The resin bonds substitute for the conventional gel-like bonds formed by hydration and have made it possible to develop suitable strength with a minimum of adverse effect on the other properties of paper. Also, by the use of resin, high contents of filler pulps may be used. These pulps contribute to low curl and expansivity and good oil absorption in paper. Work with resins was carried on at the National Bureau of Standards with the counsel of an advisory committee of technical representatives under the chairmanship of the director of research, Lithographic Technical Foundation, several years ago.

Pie chart #1 suggests properties of a paper that has high tensile strength, with a corresponding compromise in the tearing strength. The paper would probably present some



difficulties as to curling since a tendency to excessive curl is stronger as the sheet is "closed up" due to refining in the manufacture.

Chart #2 indicates a paper that has been beaten very little, giving a high tear strength, low tensile, and probably a somewhat "wild" formation compared to paper #1.

Chart #3 shows that a paper wellsized with rosin or rosin-wax combination, to resist penetration of water, will have poor water absorbency and a hard, brittle sheet with "snap" may be produced.

Chart #4 indicates that both the bursting strength (measured in points, Mullen) and the surface strength (measured by wax pick test) will tend to rise or fall together as beating of the paper pulp progresses. The two properties generally parallel each other. High resistance to pick is essential in offset printing papers. The surface fibers must resist the pull necessary to transfer tacky ink from the rubber blanket to the paper without lifting or being themselves transferred to the blanket. A fiber or bundle of fibers loosened by the pull of the ink not only leaves a blemish in the printed image on the sheet where the "picking" occurs, but it clings to the blanket where it becomes moistened and repels ink to print white spots on succeeding sheets

Chart #5 suggests that the high tensile strength developed in a sheet by beating is obtained at the sacrifice of good opacity. The sheet if beaten long enough, would approach the translucent glassine grade of paper, used as food wrapping and decoration.

Chart #6 shows that the important oil absorbency property is adversely affected when the bursting strength figure rises.

Starting this month, a series of articles on the important subject of selection of papers for offset lithography, authored by paper experts and consultants, will be presented.

In future months we will present the plans of paper manufacturers for development of better papers and also give some details on current paper production, testing, and evaluating methods.

Some Problems With Offset Paper

By Olin E. Freedman

Graphic Arts Consultant, Chicago

E HAVE conditions in offset lithography which are considerably different from those encountered in letterpress. For instance, a form is brought into contact with paper in letterpress, but not overall contact. On a platen press we have the clamshell motion and we can feed many different papers through such a letterpress machine. On a cylinder press or even on a web press, we can also send almost any paper through even though variations in thickness exist, because we have those portions which are removed and are not printing. Wrinkles and little inequalities in the sheet will be taken up through those gutters or other open areas.

In offset, when paper is traveling around the impression cylinder and comes in contact with the blanket cylinder, we have a condition which can lead to some complications if we don't have due regard for the requirements of the process and the paper.

Across the entire length of the cylinder we have the paper in contact with the blanket. Whether it's inked at any given point or whether it's an open area, we still have contact with the blanket. The result is that, if we have any little waves or buckles or curl in the paper — in other words, if it's not lying flat and hugging the surface of the impression cylinder — there is no place for those wrinkles or buckles to go. They will be pushed back until finally the paper folds over and creases are made.

In this process we have another

Register, coating, moisture content, picking, flatness must be considered.

situation which is not encountered in the others. We have a blanket that has a certain resiliency, and that resiliency results in what we call tack or suction or tendency to pull on the surface of the paper as it is being printed. That pull is accentuated because the inks used in offset printing are usually somewhat heavier bodied and stiffer than those used in letterpress, and much more so than those used in gravure work. Areas of the blanket surface which do not carry ink are slightly moistened, which increases the tackiness and the tendency to adhere to the paper. Therefore, if a paper is not suitable, we have a difficulty which comes under the general head of "picking."

Picking means that we have particles of the paper which are lifted. On coated papers the coating may be likely to pick; and on uncoated papers we will pick up fibers and filler. These not only look bad but will be carried back by the blanket direct to the plate. They will embed themselves in the depressions and grain of the plate and soon may take on ink, causing spots throughout the non-printing areas.

Still another problem in the printing of offset lies in the fact that the plate goes to press in one piece. That is an advantage, if it will register with preceding colors. It's very fine to have everything in one piece when we go to press, so that we don't have to tie up the press for long periods of time in registering the individual elements. On the other hand, if we have paper which has gone out of register after printing the first color, or any previous color—then it is most difficult to get back into register.

Correct Register

Around the cylinder in this direction, we can do things to correct register. Under the plate, and also under the blanket, we have a certain amount of packing, much the same as any cylinder press used for letterpress printing. If we find that the design is printing too long, we can take out .001 to .003 inch of packing beneath the plate, thereby reducing the radius of the cylinder and, at each revolution it is printing slightly shorter. If the trouble, as it does more frequently, lies with the stretching of stock, or lengthening of stock after the initial color, we can add a little bit of packing under either the plate or the blanket, causing the image to print slightly long.

Because of the ability to do some things about register around the cylinder, but not on the length of the cylinder, it is considered very important to have all stock that goes through an offset press carry the grain the long way of the sheet; in other words, with the grain parallel to the axis of the cylinder, running in the same direction as the length of the cylinder. In that way, most of our trouble in dimensional changes of paper, which occur during the processing, will be around the cylinder.

We also have this constant problem of the grain requirements in the bindery. We know it is highly desirable and in some cases, indispensable, that the grain be parallel with the binding edge. That is particularly true as we get into the heavier stocks. If we are running stock 60 lbs. or heavier and expect it to hold hairline register, the long grain is absolutely essential. I don't think a competent foreman of a coloroffset pressroom would even undertake to put the form to press if we told him it had to run with short grain.

When we have any change of moisture content of stock it usually shows up at the edges if that stock is standing in piles. Along these edges, when the grain begins to buckle, we begin to get a puckering condition. If we try to feed that to the grippers, particularly with the type of gripper mechanism and guide mechanism that has been standardized on virtually all offset presses up until very recently, we will have constant stops, because the roll-in feeds will not take those sheets. This is another reason why long grain is essential.

Squareness of paper before it goes to press, especially if close register has to be maintained, is substantially more important in offset than it is in letterpress.

Web Offset Growing

The field of web offset is expanding very rapidly. Offset has certain advantages over letterpress web presses in that it doesn't have the extremely costly preparation of press plates, in making curved stereotypes or electrotypes and nickeltypes. It doesn't have the time-consuming operations of registering those forms and placing on one plate at a time, and has the very distinct advantage of being able to print two sides as the web goes through, without using a separate impression cylinder, thus avoiding the trouble of printing a wet side in contact with an impression cylinder where you are bound to have smudging and other trouble. Web presses are probably increasing in their applications more rapidly than sheet fed presses.

Regarding grain on web presses, whether it is offset, letterpress or gravure, the grain always runs in the direction in which the web is traveling. That's the way the paper is made on the paper machine and there is no choice. We can't have the grain running across the web when running from a roll of paper.

Flatness in paper for offset is desirable. Internal stresses in paper stock should be at a minimum so that under a slight change of condition, they will not curl. It's a problem of the papermaker to give lithographers a sheet that is as flat as possible and one that will remain so under working conditions.

We need freedom from dust, lint, loose fibers, slivers, etc. Any little sliver, or perhaps a nail or tack, or other foreign substance that would come through the paper, could damage an expensive blanket, or scratch the plate. We want clean paper!

Another very important characteristic of offset papers that will print successfully is that they be as nearly neutral as possible in their chemical reaction. We want a pH reaction of our paper close to 7.0. When papers have any chemical reaction, it is usually slightly alkaline. Chromic acid is added to the water fountain and if we are picking up a little alkali from the paper, it will be picked up by the dampening rollers, conveyed back to the fountain and tend to neutralize the fountain solution. It will sometimes attack the inks. We had conditions at one time when different attempts were being made to produce suitable coated stocks for offset, in which too much alum in paper would even attack the metal in the plates. What we want is a neutral sheet. We can go up to possibly 7.5 on the pH scale, before we begin to have trouble.

Relative Humidity

A property that is of more importance to lithographers than absolute humidity is relative humidity. I think the industry is in agreement that the best operating condition in offset pressrooms is at a temperature of not under 75 degrees and not over 80, and at a relative humidity between 45 and 55 percent.

For paper to be in balance so that (Continued on Page 125)

NALC Completes

Convention Plans

DETAILED presentation of work simplification methods for the litho shop and a weekend in Milwaukee are the chief attractions of the annual convention of the National Association of Litho Clubs next month. NALC will meet May 6-7 in the Hotel Schroeder. Roy Tenge, Western Printing & Lithographing Co., general chairman, and Peter A. Brogle, Sam'l Bingham's Son Mfg. Co., publicity chairman, reported that the program for the convention is complete, including entertainment, the annual banquet and events for the women.

The talk on work simplification will be given at the Saturday morning session by Charles A. Conrard, personnel director of Western Printing & Lithographing Co. His presentation will include a film showing various phases of the program in action at Western's Racine, Wis., plant.

What It Will Cost

Here's what the NALC convention will cost for members and their wives:

All activities, Friday and Saturday: Single: \$15 — Couple: \$25

Banquet and Floor Show, Saturday evening: Single: \$7.50 — Couple: \$15

Rudolph C. Bartz, 2744 North 24th Place, Milwaukee 6, is in charge of reservations for the convention. Checks should be made out to the Milwaukee Litho Club. Mr. Conrard joined Western in 1943 after serving many years with Kirby Lithographic Co., Washington, D. C. He has been active in work simplification conferences for the past six years and heads the Printing Industry of America Committee on that subject.

Hal Goodnough, sales promotion manager for the Milwaukee Braves baseball team, is scheduled to be luncheon speaker Friday afternoon. To provide comic relief for the regular business sessions, the convention committee has lined up Prof. Russell Oakes to address the Saturday luncheon.

His contributions to the lithographic industry have been nil, but the professor has distinguished himself by inventing a hydraulic cigarette lighter and a chewing-gum powered fan.

Business sessions are scheduled for the mornings of both days of the convention and on Friday afternoon. Saturday afternoon is open for activities in the city, with the annual banquet ending the meeting Saturday evening.

The women's program includes such diversified activities as a display of "Hats on Parade" and a tour of the Miller Brewing Co. plant.

Jack Blades, of Washington, D. C., is president of NALC. Other officers are W. O. Morgan, Chicago, first vice president; Walter Blattenberger, St. Louis, second vice president; Frank H. Mortimer, Washington, D. C., executive secretary; Sol D'Alessandro, Cleveland, treasurer; Herman C. Goebel, Twin Cities and James Beldotte, Boston, both assistant secretaries; and Fred A. Fowler, Washington, D. C., historian.★



Roy Tenge



C. A. Conrard



Prof. Russell Oakes



Hal Goodnough

General view of audience at LTF meeting.

LTF board of directors meets. Around table (r.1.) H. A. Porter, Harris-Seybold; Andrew Donaldson, Strobridge Litho.; C. N. Reed, Niagara Litho.; W. F. Cornell, Interchemical Corp.; J. F. Perrin, U. S. Printing & Litho.; Miss Nacomi Berber, LTF secretary; J. L. Landenberger, Ketterlinus Litho., LTF Pres.; W. E. Griswold, LTF Exec. Dir.; Ronald Drake, Champion Paper.; and Sam Weil, Keller-Crescent Co. Center (r.-1.) J. S. Miller, Gazette Printing Co.; Arthur Hitchings, Forbes Litho.; Charles Shapiro, LTF Ed. Mgr.; Theodore Greifzu, Graphic Arts Co.; W. M. Garrigus, A. L. Garber Co.; Z. W. Adams, Magill-Weinshelmer; Michael H. Bruno, LTF Research Mgr.; and Don Black, Western Printing & Litho.

Airs
Airs
Research
Projects
In
Chicago

G. W. Jorgensen (L.) and Michael H. Bruno, both of LTF staff, examine test results with the Foundation's press inkometer. Instrument was built in 1930, and has since been improved.

Harry A. Porter, Harris-Seybold Co., Cleveland, acting chairman of the educational committee, in the absence of Ralph Cole, Consolidated Litho., New York, addresses meeting. At right is Charles Shapiro, LTF educational manager.



THE lithographic industry's determined efforts during 1954 to improve its products through research were reviewed at the annual meeting of the Lithographic Technical Foundation in Chicago, Feb. 28-

Reports by the Foundation's research staff revealed many significant results from their labors at Glessner House, with direct bearing on the future progress of quality offset reproduction. Committees developed plans for 1955 program at meetings during the four-day gatherings. At the final business meeting six new directors were elected. Before adjournment the board took various actions which will determine the future direction of the Foundation's activities. Among others it was agreed that the research laboratory will remain at Glessner House in Chicago until April, 1958, under rent-free lease from owners of the property. At that time an option for purchase of the building will be acted on.

Two Receive Plagues

Attendance was 175. Among highlights of the meetings was the presentation of engrossed plaques to Ernest E. Jones, head of Graphic Arts Corp., Toledo, O., and to Donald A. Black, assistant to the president, Western Printing & Lithographing Co., Racine, Wis., for their achievements in promoting the organization's interests. J. Louis Landenberger, president of Ketterlinus Lithographic Mfg. Co., Philadelphia, and president of the Foundation, made the presentations.

Prime interest for all present was in the two-day session of the Research Committee, of which Z. Wayne Adams, vice president, Magill-Weinsheimer Co., Chicago, is chairman.

Michael Bruno, manager of research at Glessner House, pointed out in his report that during 1954 there was a very significant and important shift of emphasis from work on development and improvement of new materials and techniques to studies of quality factors and paper and ink printability. This shift, starting seven years ago, gathered momentum slowly By H. H. Slawson

Chicago Correspondent

and went into full swing last year, he

Most important studies during 1954, he added, were those on quality and on the press inkometer. Dampening studies were conducted and important work was accomplished in paper and ink research that is leading to a better understanding of what happens during offset printing. Tinting complaints were investigated and studies of color reproduction and masking were finally started in 1954, with several exploratory test runs using magenta, single and double overlay masking.

Other research projects included

LTF staff outlines work conducted during 1954 at series of meetings

desensitization, diazo and casein coatings, surface treatment for zinc and aluminum, chemical deposit of copper on zinc, measurement of plate grains and use of corrosion inhibitors during the graining operation.

Mr. Bruno also discussed the status of contract work for the Army and said that library activities, total writing activities and participation in printers' meetings all increased.

Total expenditure research department during 1954 was \$135,048.89, he stated. Credits earned from various sources resulted in net expenditures of \$89,351.21, this being some \$7,000 under the budget authorized by the board a year ago. At another time during the meeting this total expenditure was characterized as "ridiculously small," compared with the average spent for research by other important American industries, based on their sales.

Ink-Water Balance

In the study of ink-water balance, conducted by G. W. Jorgensen, of the laboratory staff, the discovery was made that water droplets get onto the inked image areas of both plate and blanket, affecting the quality of the finished printed piece. In this study the LTF inkometer was utilized in seven tests under practical running conditions in two litho plants. Built in 1930, this instrument has been refined and improved and has been demonstrated as an excellent means for measuring ink-water balance. The transfer of water droplets was thought to come from the form rollers but just how this occurs and what can be done about it are, as yet, unanswered questions.

The problem is more acute on multi-color equipment than on single color, Mr. Jorgensen said. Any recommendations for corrective measures would be meaningless, he declared, if the further studies needed to get to the bottom of this problem cannot be conducted on a two-color or four-color press. The Foundation at present lacks such equipment but it was hopefully made known that room can be found for a big press at Glessner House, "by building a roof over the alley."

Studies of ink transfer during printing were undertaken to gain a better understanding of what happens when the ink film is split as it is transferred on the offset press from plate to blanket to paper.

C. H. Borchers, who conducted this study, described the unique equipment specially devised, which included an LTF pick tester, equipped with strain gauges, a resistance gauge, amplifier, oscilloscope and special Polaroid camera.

"Round robin" tests of the LTF inkometer by cooperating lithographers revealed inconsistencies in the readings, Dr. Robert F. Reed reported. Some indication was given that the differences noted might have been caused by variations in the composition rollers, made of rubber and a plasticizer. Roller makers, he stated, are cooperating to answer this question.

Studies of tinting troubles, about which the laboratory received many complaints and inquiries, have led to an investigation of the possibility that some substance in the paper stock reacts with the ink or water on the press. Further explorations in this direction are to be made, it was announced. It was also reported that new paper, fresh from the mill, gives tinting trouble but that after some aging this ceases.

Pick Tester

The LTF pick tester is filling a definite need for both lithographers and paper manufacturers, a survey made during the year established. Lithographers answering the questionnaire indicated that they find this instrument very useful in diagnosing and predicting picking troubles.

Dr. Reed, in his review of inkpaper relationships, reported that almost half the technical inquiries coming to the laboratory are concerned with picking troubles. This, he said, may indicate that lithographers are becoming more quality conscious and printing conditions are becoming more severe. At any rate, he declared, it is well known that buyers of lithography are becoming more quality conscious, thus warranting increased attention to use of the pick tester.

The Foundation's inkometer has been available since 1949, but only approximately 200 are in use, Dr. Reed also revealed. A small number are utilized by lithographers but most of them are owned and used by ink manufacturers, he said.

Color Reproduction

The color reproduction studies got under way late in 1954, under the direction of Bruce Tory, who is head of the School of Printing in Sydney, Australia and now working at Glessner House as an exchange student on a Fulbright scholarship.

Purpose of this project is to evaluate the relative efficiencies of color masking methods advocated by various parties. Also sought is a determination of the relationships between primary ink colors and the type and amount of masking required to reproduce these colors properly.

Press dampening studies initiated last year have acquired new importance following the findings in the inkometer tests that water droplets are deposited on the inked areas of plate and blanket. Mr. Bruno, in commenting on this, pointed out that the new presensitized plates now in use require less dampening than conventional plates. He referred the audience to Modern Lithography's February 1955 article on "Disposable Dampener Roll Covers" for the latest discussion of this matter.

Spray Dampeners

A report was given by Mr. Borchers on the laboratory's work on spray dampeners, particularly the new pneumatically controlled model now

under test on a Harris litho press,

Another problem brought up during the year concerned the breakage of plates at the clamp, especially on high speed rotary presses. This matter was passed on to the new web offset press association and will be discussed at that group's forthcoming convention, he said.

Plate Protection

Protection of lithographic plates to increase their life during storage was the subject of one study on the applied research program. Here an idea was borrowed from the food industry which uses low-melt waxes to protect cheese and meats. Whether or not this will be of value in the litho shop has not yet been conclusively determined. One lithographer reported from the floor that he is using a plastic substance to protect his used plates.

At the membership meeting John F. Perrin, U. S. Printing & Lithographing Co., Mineola, N. Y., was reelected to a second term as a member of the board of directors. To replace five others whose terms expired the members elected Andrew Donaldson, Strobridge Litho Co., Cincinnati, O.; Theodore A. Greifzu, Graphic Arts, Inc., Philadelphia; J. Hanes Lassiter, The Lassiter Corp., Charlotte, N. C.; Frank I. Paganini, Security Litho Co., San Francisco, and I. S. Preston, Bureau of Engraving, Minneapolis.

Also elected to the Board were Ronald I. Drake, Champion Paper & (Continued on Page 121)

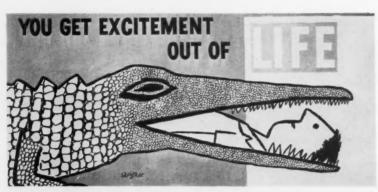
Don Black (1). Western Printing & Litho Co., Racine, Wis., receives plaque for service to LTF from President Landenberger. In right hand photo, Mr. Landenberger reads citation of plaque pesented to Ernest E. Jones, Graphic Arts Corp., Toledo, O. (l.-r.) Jack White,

assistant to LTF research manager; Z. Wayne Adams, Magill-Weinsheimer Co., Chicago; Mr. Jones; Mr. Landenberger; John King, Ralph-Clark-Stone Ltd., Toronto; and George W. Jorgensen, LTF superintendent.





Gugler Litho Wins Top Poster Awards



1. Gugler Lithographic Co.



2. Spurgeon-Tucker, Inc.



3. Gugler Lithographic Co.

GUGLER Lithographic Co., Milwaukee, was responsible for lithographing more than a score of the "100 Best Posters of 1954," including the prize winner for Life magazine and the third place poster for Kool-Aid.

The awards were made at the 23rd National Competition of Outdoor Advertising, sponsored by the Art Directors Club of Chicago last month.

French artist Raymond Savignac designed the winning poster, with Young & Rubicam as the agency handling the job. Fred S. Sergenian is art director, and John Howard was the artist for the job.

The Kool-Aid poster was produced for Foote, Cone & Belding, with Marvin Potts as art director. A winter scene showing Life Savers floating down a stream, won second prize. It was lithographed by Spurgeon-Tucker, Inc., for Young & Rubicam. James Bingham was the artist, Harlow Rockwell the art director.

Presented at Luncheon

Presentation of awards was made at a luncheon, March 17 in Chicago's Sheraton Hotel. On display with the grand award winners were the "100 Best Posters of 1954," selected by the judges from among entries in the competition.

Following Gugler were five lithographers who produced four winners among the 100. They were Edwards & Deutsch Lithographing Co., U. S. Printing & Lithographing Co., Compton & Sons, Inc., Continental Litho Corp. and National Printing & Engraving Co. Credit was given Western Printing & Lithographing Co. for three posters and Thomson-Symon Co. made two, while one each was produced by National Printing & Lithographing Co., McCandlish Lithographic Co., Morgan Lithograph Corp., Schmidt Lithograph Co., H. S. Crocker Co. and Conway, Ruck & Associates.

'100 Best'

Following the show, Outdoor Advertising, Inc., Chicago, will publish its "Poster Annual for 1955" with (Continued on Page 125)

A Need for Standards In Printing Industry

N ORDER to explain a big thing that is happening in the printing industry in particular, I want first to point to a couple of recent predictions made by eminent industrialists regarding industry in general.

David Sarnoff, chairman of the Radio Corporation of America, in the March issue of Reader's Digest starts off his article titled "Preview of the Next 25 Years" with this statement: "The dominant physical fact in the next quarter-century will be unprecedented technological progress." Mr. Sarnoff then reviews some of the tremendous strides that have been made in medicine, in electricity and in electronics, the applications of which are finding their way into so many industries. He indicates that such progress in technological development in the future will not be merely a case of continued increase but of continued acceleration of increase. And he says that this pattern of rapid growth holds true for American industry as a whole.

Increases Predicted

The other prediction was made in a statement from the General Electric Co. The spokesman, referring especially to electronic and atomic energy, declared: "These fields are so promising that we expect to produce more in the next 10 years than in all the previous 75 years of our existence."

Now let us try to fit the printing industry into this optimistic picture. To do so, we must first look at our past; then we must try to look into our future.

The critical historical review that we must make reveals many interesting facts — some good, some not so By John H. Davis, Jr.,

President, Research and Engineering Council; Vice-President and Secretary, Judd & Detweiler, Inc.

good. As far as growth is concerned, we can be proud. Ours is among the top 10 of the 20 major groups of manufacturing industries. It is an industry of great importance.

But what has caused us to grow to the great stature we have achieved? We owe it to others. The need for us by other industries has made us great. Every type of industry and all phases of business need the printer. So, we must truthfully admit that we have been aided constantly in our growth by groups that are not aligned with us but, rather, are dependent upon us.

And what of technological advancements devised and developed for us by us - advancements that would improve our product and our methods and at the same time reduce our costs? What credit may we give ourselves in this element of progress that is so important in every manufacturing industry? We cannot give ourselves even a passing mark. Through the years, while other great industries have made such remarkable advances in research and technological development, our industry (with some few exceptions) has been almost a "do-nothing" group. A "satisfied, why change?" attitude has prevailed.

Several Reasons

There have been reasons for this seemingly disinterested attitude. Mind you, I don't say we should be excused for the situation; I merely say there have been reasons for it. One reason often presented is that our industry is composed of so many small units scattered across the country that it is difficult for our ideas about research and engineering development to congeal into a positive attitude.

Another reason sometimes presented is that we have not had the advantage of college-trained men in the graphic arts to carry forward any large degree of research or technological development. We needn't question whose fault that is!

All the reasons why we find our industry in the position it is in to-day regarding technological development can be neatly bundled up and placed on the shoulders of the men who make up that industry. We have not done a job, and we started not doing a job a long time ago.

So much for our review of the past.

Now let us look at the second consideration we must make in regard to our position in the new "Industrial Revolution." What of our future?

It will take us some time to recover all the potential progress that passed us by in the last 50 years while we were taking the slow road with all the detours, but there has to be a beginning. I am happy to say that such a beginning is founded in the organization that I represent—the Research and Engineering Council of the Graphic Arts Industry.

Before actually discussing its work, I would like to point out that the very existence of the Research and Engineering Council takes care of the two reasons we have just mentioned why the printing industry in the past has not been able to achieve technological advancement within its own doors. The Council can be a nucleus for the ideas of the printers throughout the nation and the men in the graphic arts associated with it.

What is this Research Council, who is behind it, and what can it do for you?

Council Work

You probably are asking yourself, "Where does my company come into

the picture?" So, let us explore the areas in which the Council has been working. Remember, we are only five years old and we have many vears to catch up.

Every industry of importance has standards, and we have already noted that our industry is one of great importance. The automobile industry has standards for many of its operations, and what is more, the companies share these standards among themselves. The steel industry, the chemical industry, engineering, and the oil industry all have standards.

From the outset, let us face the fact that there is need for standards in the printing industry. Those in printing production know only too well that in many areas of operation there are no procedures agreed upon as being proper.

There is much variation in practices among printing plants across the nation. There is variation among plants within a city. And sometimes there is a difference of opinion regarding procedures among men in the same plant. These varying practices relate to composing room operations, press makeready, paper and ink compatibility, photoengraving, electrotyping and even in such areas as work flow, plant painting and lighting, and color evaluation. In all of these operations, we should remember that in most cases there is only one best way.

As long as we stick to the printer's popular phrase, "Oh, yes, a printing job is like a suit of clothes in that it is a tailor-made job," we are stagnating as far as our ability to establish standards is concerned. Of course, each printing job does have its own particular problems of execution, but there is a long section of pipeline in the flow of printed work for which standards can be established.

Must Use Data

Available scientific and technical knowledge that may have been built up during the years within our industry, in laboratories, and in other industries needs to be translated into practical procedures for use by the graphic arts industry. Standardization is the best avenue for this trans-

Handling and Storage of Paper Project 3:

to provide a report containing suggested methods for Objective: the handling and wrapping of paper stock from the

mill to the printer, with recommmendations for inspection and protection of the stock in transit.

Solvents and Cleaners in the Printing Industry Project 8: Objective:

To determine the ideal characteristics of solvents required for the various cleansing operations in the industry by analyzing the solvents now in use.

Standardization of Controls and Signaling Project 17: Objective:

To develop, in cooperation with the National Safety Council, American Standards for Controls and Signaling Devices for Graphic Arts Equipment.

Project 22: Painting and Lighting

To develop standards for painting and lighting in the Objective: Graphic Arts Industry.

lating process. To establish standards, the Research and Engineering Council collects data, holds discussions among industry people, sifts through practices and procedures (many of which we know still stem from the printer's rule of thumb), adds scientific testing and evaluation, and brings specific methods and procedures to a known point of evaluation. In other words, the Council can find the best way.

How has the Research and Engineering Council gone about providing this number one need of the industry? First, there was the necessity to establish positively the need for standards in the industry. This has been partially accomplished through the holding of technical conferences such as the two conferences held on makeready: the first in Chicago in 1952, and the second in Cincinnati a year later. These two conferences alone pointed up the tremendous area of conflicting opinion relating to certain practices in makeready procedure in all major printing processes. Group discussions were held concurrently in separate meeting rooms, each group discussing the practices followed in its particular process. The letterpress group was in one room, gravure in a second room and lithography in a third room. Dwight Monaco, Assistant Vice-President and Director of Manufacturing for the McGraw-Hill Publishing Co., said at the letterpress session: "Let us hope that one result of this letterpress session will be an awakening to the need of standard practices in all phases of making ready printed matter from conception to execution."

Standards Needed

A technical conference on color photography and color printing, held at our annual meeting last May, disclosed other areas in the field of printing manufacture that sorely needed standards. In addition to such technical conferences, the Research and Engineering Council has active committees working on projects. Some of the problems met in many of our projects are often solved by determining a standard, or several standards, as the case may be. For instance, some of the Research and Engineering Council's projects are listed on this page. The objective of each project is to develop a standard.

This then, is how the Research and Engineering Council operates. From its general membership, areas that need investigative research are identified. Through technical conferences and general and special project committees made up of Council members, these areas are explored with the aim of setting up standards and then issuing a report of the findings to the general membership.

Here are the groups which make (Continued on Page 123)



Getting set for TAGA meeting May 9-11, Willard Greenwood, (1.) Forbes Lithograph Co., Boston, member of TAGA color committee, examines a four-color press sheet sample with a Binocular Microscope and explains his findings to George Hammer, also of Forbes, secretary-treasurer of the association. At extreme left is an Illuminator and at right a Colorimeter.

Speakers Announced For TAGA Meeting

ELEVEN experts on graphic arts subjects have been announced as speakers at the Seventh Annual Meeting of the Technical Association of the Graphic Arts. The meeting is to be held at the Somerset Hotel, Boston, May 9-11.

Papers committee chairman, Robert M. Leekley, Time, Inc., Springdale Laboratories Div., Springdale, Conn., and Merrill N. Friend, Plant

Research Engineer, Spaulding-Moss Co., Boston, general meeting chairman, made the announcement.

Authors, affiliations, and titles of papers follow: J. S. Rydz and V. L. Marquart, Radio Corp. of America, Camden, N. J., "Applications of the Neugebauer Equations"; H. E. Rose, RCA, "Adaptation of Electronic Color Correction to the Printing Process"; J. R. Bradford, U. S. Radium,

"Atomic Energy in the Graphic Arts"; David Lewis, American Newspaper Publishers Assoc., "Dry Offset"; R. V. Shalvoy, Stecher-Traung Lithograph Corp., "Use of the LTF Inkometer in Printing Plants."

Also William H. Wood, Harris-Seybold Co., "A Review of Dampening Systems for Lithographic Presses"; J. G. Gordon, Time, Inc., "Application of Masking Theory to Letterpress Printing by the Electronic Scanner"; George Jorgensen, Lithograph Technical Foundation, "Graininess in Lithographic Prints"; Charles Borchers, Lithograph Technical Foundation, "Studies in Ink Transfer During Printing"; N. J. Beckman, Kimberly-Clark Paper Co., "The Measurement of Ink Drying of Letterpress and Lithographic Inks on Coated Book Papers."★

Research & Engineering Meeting Follows TAGA

CHOICE of three tours covering a variety of laboratories and plants is on the agenda for the Fifth Annual Meeting of the Research and Engineering Council of the Graphic Arts Industry, following the TAGA meeting.

The Research and Engineering sessions are scheduled for May 11-13 in the Parker House, Boston.

The series of tours is planned for the opening day of the meeting. On May 12 the program will include a combined meeting of the executives, planning and publications committees of the council.

Plans for the annual meeting were announced by the program committee after a meeting in the Hotel Commodore, New York, in late February.

Dwight L. Monaco, of McGraw-Hill Publishing Co. is chairman of the program committee. Attending the meeting, in addition to Mr. Monaco, were W. W. Garth, Jr., Graphic Arts Research Foundation, Inc.; William Baumrucker, Jr., Boston *Herald-Traveler*; S. F. Chernoble, Comet, Press, Inc.; Alan S. Holliday, Craftsmen, Inc.; W. E. Griswold, Lithographic Technical Foundation; P. J. Bernard, H. Wolff Book Manufacturing Co.

Also Christian E. Burckel, Christian E. Burckel & Associates, representing Walter S. Reed, Dexter Folder Co.; and Ralph R. Enghouser, Sylvania Electric Products Co., representing J. Wallace Scott, Jr., Allen, Lane & Scott.

Is your shop saving money with

Preventive Maintenance?

ITHOGRAPHERS who lack an adequate maintenance program, can learn a lot by studying the program of Dennison Mfg. Co., conducted on the "stitch in time saves nine" principle. It is paying big dividends, Lester C. Leach, plant engineer, asserts.

Details of the big Framingham, Mass., paper converting company's plans for making repairs before trouble develops were explained by Mr. Leach at the recent plant maintenance conference and exposition in Chicago. Dennison's factory covers about one million square feet of floor space and employs 2,500 persons, 200 of whom work in the maintenance division. All three major printing processes are used.

Repair Early

Maintenance costs are closely budgeted and it has been found, Mr. Leach said, that a good way to keep these costs down is to do the repair work before it becomes serious. Buildings and machines are inspected periodically and orders for needed work prepared and scheduled so machine down time can be kept to a minimum. Inspections at first were continuous, one skilled mechanic being assigned to this task the year round. Recently this practice was changed and a complete plant inspection is made by a different all-around machinist each quarter.

Repair work found needed is classified as to importance. In some cases, if the condition is serious and a major breakdown might occur immediately, the machine is shut down

"For instance," said Mr. Leach, "on one of our large two-color presses a chain drive was found to have a badly worn sprocket and chain. This press was stopped at once, because, if the sprocket and chain had broken while the machine was running at full speed, the press might have been wrecked and a repair job, costing perhaps \$1,200 or more, would have been necessary."

Safety Stop

Another instance, he said, was a matter of safety. It involved a large die-cut press, fed by hand on which



the inspector found the brake in bad shape. The safety stop, he explained, operated too slowly and a man might lose his fingers, so the machine was shut down immediately and repaired.

Many machines require similar attention, he continued, but if not urgent, follow-up cards are prepared and the work scheduled for attention, monthly or quarterly, some of it half-yearly and a part only once a year. Supervisors receive the card and a duplicate is kept in the planning office for checking to see that the repairs are made.

Stock of Parts

One feature of the Dennison system for reducing maintenance costs is the stock of spare parts kept on hand in anticipation of repeated demand for them. This spare parts inventory is built up from experience and is justified, Mr. Leach said, by the fact that at least six of some parts will be needed each year. Quantities are made in a production shop at a much lower cost than if a machinist made them individually when a break occurred. Repeated repairs, he declared, often suggest a design change for some part of the machine, so it will stand up longer under use. Other repeat repairs can be cut down, he added, if they are studied and proper precautions taken. It is a rare case, he said, when outside repairmen have to be brought in to make repairs.

Neglect of lubrication is a direct factor in maintenance costs, he added, many repairs being the result of clogged oil channels or failure to oil the machine. Fast moving parts on a machine are oiled every day by the operator, but some equipment has forced oil lubrication with a circulating system. Such systems are expensive because this equipment itself needs a certain amount of maintenance.

"On some complicated machines," he went on, "an automatic or semi-automatic lubricating system is used and of the several available, we find the Farval system very useful, fool-proof and requiring very little maintenance. In one instance, after installing this Farval system, we found that a machine that previously required 48 minutes for lubricating, can now be oiled in three minutes."

Standard Cost System

All Dennison activities are controlled by budgets which, in turn, are tied in with a standard cost system. Mr. Leach explained in detail how the maintenance division arrives at anticipated expenditures for the ensuing year and how day-to-day per-

(Continued on Page 127)

PHOTOGRAPHIC

Clinic

Q: What is "color temperature"? C.V.B., Scranton, Pa.

A: Color temperature is a means of expressing the spectral composition of radiant energy and is generally used in connection with light sources. The basis for the color temperature scale is a theoretical black body radiator that absorbs all incident light, reflects none, but emits light when its physical temperature is raised. It can be compared to a piece of iron or steel which, when heated, first glows a dull red and progresses to a brilliant white at higher temperatures. The wavelength makeup of radiation from this black body radiator is always directly related to its physical temperature. When black body radiation is measured throughout a wide range of temperatures, a family of curves is obtained.

These curves indicate precisely the wavelengths, and their proportions, present at particular temperatures. The scale is expressed in degrees Kelvin. The most significant difference in spectral distribution at various color temperatures is the ratio of energy in the long and short wavelengths. At low temperatures the long rays (red) exceed the short rays (blue). At very high temperatures the shorter wavelengths are present in a greater proportion than the long waves. At an intermediate point the red, green and blue rays are about equal.

When a color temperature rating is assigned to a light source it is accurate only if the source radiates energy in the same manner as a black body radiator. Thus, color

This is one of α series of "Photographic Clinics," consisting of questions and answers covering all phases of photography for lithographic reproduction. Mr. Paschel is α well-known consultant and contributor to this magazine. Subscribers should send questions to

Herbert P. Paschel c/o Modern Lithography Box 31 Caldwell, N. I.

temperature designations are precise when applied to tungsten filament lamps. These operate very much like the black body standard. Fluorescent tubes do not function like a black body and color temperature values applied to such light sources are only approximate, and often misleading.

Two light sources that appear to be the same are often said to have the same color temperature. This is not necessarily true. The visual effects may not be the same under two sources which do not have the exact same spectral distribution. Photographic effects will certainly not be the same with two physically dissimilar light sources. Color temperature values can be extremely valuable in predetermining visual and photographic reactions, but only if properly applied and thoroughly understood.

Q: Are there any advantages of special shaped stops over the circular stop in half-tone work? J.B.S., Hartford, Conn.

A: The answer depends entirely upon the effect desired. If the intent is to produce a halftone of unusual pattern, whether it be square, elliptical, or split dots, wavy or straight lines, etc., then, of course, special stops are mandatory. However, if

By Herbert P. Paschel

the purpose is merely to improve tone and detail rendition from conventional copy, the use of special stops is questionable. Experience has shown that the circular stop produces entirely satisfactory results for the bulk of the copy photographed. Why complicate matters by introducing special stops? Under most conditions special stops used throughout the entire halftone treatment would show little, if any, improvement.

Although there are exceptions, as, for example, the square, dog-eared and elliptical stops for the highlight exposure, these do not justify the use of special stops for all work. One of the chief difficulties in the use of special stops is the fact that the stops must invariably be made by the user since there are no commercial sources that I know of. In making special stops great accuracy must be employed; if not accurately centered with the optical axis and orientated with the screen ruling, the effect will not be consistent. Coordinating the stop area to the bellows extension (focus) is quickly and accurately accomplished with iris diaphragms. With the special stops this necessary coordination requires a great number of stops of the same shape but different area, to accommodate the wide range of reduction and enlargement encountered. If used for color work, a set of stops of each shape must be made for each angle of screen rotation used.

This criticism is not intended to discourage the use of special stops—in fact, the use of special stops for unusual and startling halftone effects

(Continued on Page 123)







1st: Schmidt Litho

1st: U. S. Pr. & Litho.

1st: Waldorf Paper

Litho Wins Box Awards

ITHOGRAPHY captured four first awards and 14 merit awards in the folding paper box contest sponsored by the Folding Paper Box Association of America in connection with its annual convention in Chicago last month.

In the "technical superiority of printing" classification first place award for lithographed jobs went to Schmidt Lithograph Co. for its "Desert Nights" box for Jamison Ranch dates.

U. S. Printing & Lithographing Co. received two first awards for its "Marlboro" cigarette carton, one in the "New Uses" category, the other in the tobacco group.

Waldorf Paper Products Co. took the other first award for its lithography in the "Carriers" class for its Schmidt beer carrying case.

Two Awards

Merit awards in the "Superiority of Printing" by lithography class went to Container Corp. of America for a Manischewitz wine box and the Paas "Easter Egg Kit"; to Gardner Board & Carton Co. for its Budweiser carrier; to U. S. Printing for its Congress playing card box, and to Lord Baltimore Press for the "Cheekos" bon bon box and the "Noa Noa" cologne carton. The latter also won a merit award in the cosmetics category.

In the food carton class merit awards went to Lord Baltimore Press for the "Lem" pie filling box and the "Junket" fine candies box, while Waldorf Paper Products Co. received a merit award for its beef and chicken pie cartons.

In the beverage class Gardner Board & Carton Co.'s carrier for Wiedemann's beer received a merit award, as did also the Lord Baltimore Press carton for "Southern Comfort" whiskey, and Container Corp. of America's "Old Hickory" box

Container Corp. got another merit award in the sporting goods class for the Bell & Howell camera container. This package was notable for its use of both lithography and letterpress printing. Waldorf's Schmidt beer carrier, one of the first award winners, also used both 4-color lithography and 2-color letterpress printing.

'Fresh Approach'

Judges, in commenting on the first place winners for "superiority of printing" by lithography said of the Schmidt Litho's date box: "A fresh approach to stimulate gift and impulse sales of a food product. . . . Extremely strong identification was achieved by printing brand and product names in white against the contrasting color of the design. As a

protective feature the bottom of the carton was parafinned on the inside."

U. S. P. & L.'s "Marlboro" cigarette carton received its first place award in both the "new uses" and the "tobacco" classes because, said the judges, "It represents a new type of packaging that could have a significant effect on both the future of packaging in the cigarette industry and the use of box board for such packaging. Handsome surface design, convenient flip-top opening and sturdy construction for protection... make this an all-around outstanding package."

Waldorf's Schmidt beer carrier won its award because, as the judges said, "It now goes to consumers in carriers that devote one full side to scenic illustrations of wild life." The three pictures..."act as a premium or collection offer to consumer and also add greatly to the product's appeal." Lithography's ability to reproduce full color designs vividly was utilized for the illustrations and letterpress for the signature panels.

'Value of Litho'

In commenting on other winners which utilized lithography, the judges repeatedly referred to the powerful sales appeal of realistic full color offset reproduction.

The Folding Paper Box Associa-(Continued on Page 123)

Merit: Container Corp.

Merit: Container Corp.

Merit: Gardner Board









A new letterhead paper in brilliant white and four beautiful pastel colors

with
Envelopes
to Match

Weston's HAND WEAVE captures all the richness and character of old world mould-made paper. It features a distinctive hand woven laid watermark in a rag content quality paper of appealing texture and high opacity. Available in brilliant white and four beautiful pastel colors — Ivory, Blue, Green and Gray — it is made especially for letterheads of distinction and for printed pieces which create an authentic handmade atmosphere.

Ask your Weston distributor for samples or write us for sample book and portfolio of specimens.



BYRON WESTON COMPANY

Makers of Fine Papers for Business Records Since 1863

DALTON, MASSACHUSETTS

THROUGH THE

WHEN the boys working at the Glessner House, Chicago laboratory of the Lithographic Technical Foundation, got down one morning last fall, they discovered that during the night, thieves had ripped five copper downspouts from the historic, 69-year-old mansion. To replace them caused quite an unplanned dent in the building maintenance budget, but the new spouts are made of a metal with a less tempting value as junk. Later it was learned that the downspouts on Eastman Kodak Co.'s new building across the street also disappeared one night. Old-timers recalled, too, that vandals once tried to steal the big bronze monument that once marked the site of the Fort Dearborn mansion in 1812 near Glessner House. Chicago Historical Society solved that one by taking the monument indoors at its museum. LTF's engineers, however, are deferring decision on the suggestion that they take their downspouts in each night.

m

United States Printing & Lithographing Co. designed and produced a new label for Tri-Valley Packing Association of California, which attracted much favorable comment at the recent Chicago convention of the National Canners Association. Outstanding new feature of the design is use of the letters "T V," drawn with a 3-dimensional effect, that takes advantage of current interest in television, while tieing in with Tri-Valley's name.

Black, the basic color of the old design, has been retained but reduced and more space is given to full color vignettes picturing the fruit in the can and combination dishes made with it. Another new feature is the smiling young farm boy carrying a curved banner bearing the words "Tri-Valley." This figure, it was announced, will be further utilized in free-standing cut-outs, wire hangers and other point-of-sale material for dealer use.

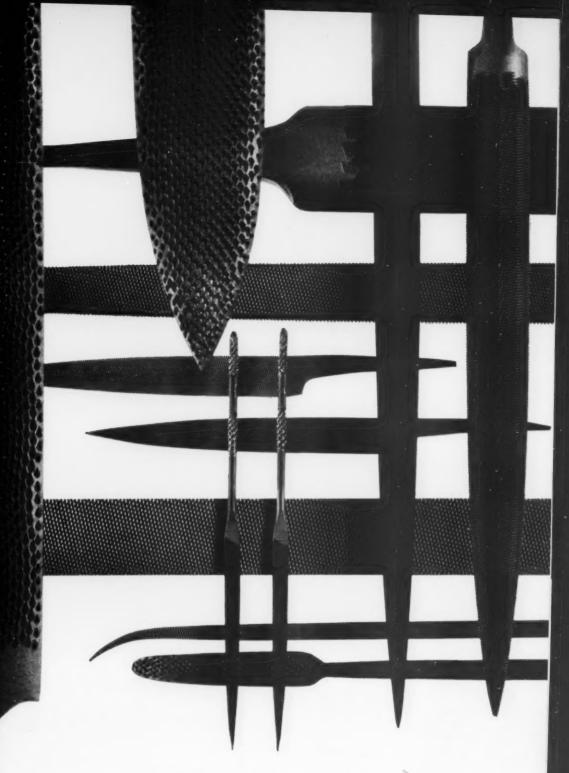
ml

"It's All in the Cards" is the title of a colorful, lavishly illustrated booklet put out by the Association of American Playing Card Manufacturers which recounts the history of playing cards from the early Persians to President Eisenhower and his interest in bridge. Helpful information included deals with, among other things, how to keep the children happy when bad weather forces them indoors and how to get physical exercise out of a deck. Playing cards are now found in 80 percent of American homes and through the promotional results of the booklet. it is hoped to make that 100 percent. To get a copy the Association says, just send an ace of spades from an old deck with name and address to Playing Cards, 420 Lexington Ave., New York 17, N. Y.



"Sure, litho prices have gone down, but the price of paper has gone up."





For the finest reproduction...



TRADE-MARK

THE CHAMPION PAPER AND FIBRE COMPANY, HAMILTON, OHIO

Number Nineteen of a series designed to show how "Champion Sets the Pace in Papermaking."



for a **last** impression as good as the first



....plates

made with

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Our carefully selected

ALBUMEN assures tough, durable

coatings free of pinholes. No

clumping. No yolks.

Our special process assures AMMONIUM DICHROMATE PHOTO that fits your exact needs ...highly pure and uniform.

results: Plates that give accurate impressions throughout long runs...less downtime...fewer makeovers. Deadlines are easier to meet. You save money, time, labor.

results: A sensitizer that renders finest details on every plate (deep etch or albumen)...crystal clear solutions that stay clear after standing...no coat-spoiling sediment.

Contact your dealer for a trial order today.

YOU CAN'T BUY BETTER



MALLINCKRODT CHEMICAL WORKS

Mallinckrodt St., St. Łouis 7, Mo. 72 Gold St., New York 8, N. Y. CHICAGO-CINCINNATI-CLEVELAND-LOS ANGELES-MONTREAL-PHILADELPHIA-SAN FRANCISCO Manufacturers of Medicinal, Photographic, Analytical and Industrial Fine Chemicals



Above, two Seybold Auto-Spacers are used as a team to cut gum wrappers. The lifts are stripped by the first machine, passed to the second for chopping. It amounts to an "assembly-line" operation.



This Seybold spacer is equipped with the popular Seybold "air-film" table. The heavy lifts of stock can be moved easily on a cushion of compressed air. Friction is reduced as much as 85% for a lift of stock weighing 400 pounds.



Wrappers printed 24-up are cut quickly and cleanly. Once set the cutting series, the Seybold spacer automatically positions paper for every cut. The automatic back gauge does the heavy wo

A Mechanical Memory Positions the Pile the Result Is Profitable MASS PRODUCTION

"Mass production" is strong talk, but here's what a Seybold Auto-Spacer will do. On a multiple-cut job, it "memorizes" the cut sequence. The back gauge then moves into correct position for each cut automatically. It does this much faster than even a skilled operator can manage with an ordinary power back-gauge machine. And, being automatic, it eliminates the chance of human error from back-gauge positioning. The net result is a much higher rate of production, and less spoilage. That's a combination that means profit.

Profit for you?

With a long-run wrapper or label job, you can see how the mass production of a Seybold Auto-Spacer means money in the bank. But suppose you have a succession of short-run jobs. Then, you can set up each cutting sequence on a spacer bar (the mechanical memory). It's a quick adjustment. When the job changes, the operator turns the bar to the next setup and he's ready to cut. For "one-shot" cutting, the machine reverts to manual operation by the flick of a switch. Incidentally, if you handle big lifts of large sheets, you'll be interested in a spacer with the Seybold "air-film" table.

How much profit?

We can't say that a Seybold Auto-Spacer will do your work faster by 20%, 50%, or any specific amount. We don't know what kind of jobs you handle, or how. But we do know, from the experience of our customers, that a Seybold Auto-Spacer will pay for itself out of increased production. And all the other advantages also go into your ledger—in black ink.

We'll appreciate an opportunity to show you a Seybold at work. If this isn't convenient, please let us send you some literature on Seybold Auto-Spacers. Just check the size you're interested in and mail the coupon. Note: We're also ready with the facts on other Seybold bindery equipment. A check mark will bring you the information.

The design and manufacture of soundly engineered graphic arts equipment is the business of Harris-Seybold. Products of its divisions and subsidiaries include leading lines of equipment for all three major printing processes—letter-press, offset and gravure.

HARRIS-SEYBOLD COMPANY

fine graphic arts equipment . . . for everybody's profit

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This Seybold spacer is set to cut and trim calendar illustrations. Since positioning is automatic, there is no spoilage of costly 4-color sheets due to operator fatigue or error.

VY W

HARRIS-SEYBOLD COMPANY
4510 East 71st Street · Cleveland 5, Ohio

34"	MARKIAL BACK GAUGE	POWER BACK GAUGE	AUTO SPACER	MILL	MILL TRIMMER- SPACER	Please send me more information or the Seybold cutter model (s) checked
40"						Mr.
44"						S
50"						Company
65"						
85"						Street
94"						
_	Anntinu	010 000	7000000			CityZone_
\dashv		OUS BOOK	TRIMMER		CHARLE	State

A note of progress.

ALUM O-LITH, Inc.

takes great pleasure in announcing
the opening of its new,
the opening of its new,
and Offices,
and Plant. Laboratory and Offices,
278 ARDEN DRIVE,
EL MONTE, CALIFORNIA



We wish to thank the lithographers of the United States whose ever growing demands have made it necessary to design and put into operation this new 17,000 square foot Alum-O-Lith plant. It is ready to meet the demands of to-day and prepared to meet the requirements of tomorrow!



the double duty plate

New Home Office: 278 Arden Drive., El Monte, California Warehouses in: Patterson, New Jersey • Atlanta, Georgia • Chicago, Illinois



COLOR PHOTOGRAPH BY ANTON BRUEHL

Who says Color's for the Birds?

More and more men are blossoming out in color, and spring fashions indicate that even more resplendent days are on the way.

But whether or not you fancy the pink shirt and fancy waistcoat, it's smart to agree, as thousands of users do, that color can spruce up business printing to great advantage. HOWARD Bond, for instance, in its twelve crisp, clean colors. These colors flag attention—create two-color printing appeal at a one-color printing cost. In business forms, they speed identification, hasten paper work, facilitate every handling and filing operation. And many business leaders are learning that letterheads on a Howard color, with matching

envelopes, earn special recognition in the morning mail.

Everywhere the trend is to color. Ask your printer or paper merchant to show you the rainbow of Howard colors. Your own imagination will take it from there.

PRINTERS! This message appears in advertising magazines read by your customers.

HOWARD PAPER MILLS, INC. . HOWARD PAPER COMPANY DIVISION, URBANA, OHIO

Howard, Bond

"The Nation's

Companion Lines: Howard Ledger • Howard Mimeograph

Business Paper"

Howard Writing • Howard Posting Ledger

Printed on MAXWELL OFFSET - substance 80 - Wove finish.



Doesn't color reproduce better on Maxwell Offset?

Howard Paper Mills, Inc. / MAXWELL PAPER COMPANY DIVISION / Franklin, Ohio

Printed on MAXWELL OFFSET Substance 80 — Wove Finish We'd be pleased to send you samples of our seven finishes and two tints

A New Feature for your WAGNER COATER

Now Available

Top Production

Manifold Lubrication System

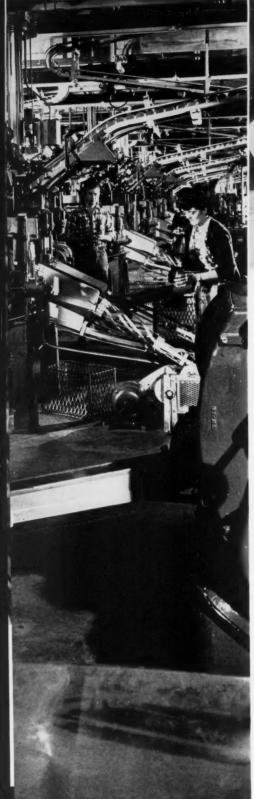
The Manifold Lubrication System, which has now been accepted by several of the leading can companies as standard equipment on new Wagner Coaters, will soon be available for machines in the field.

You can have production around the clock and keep your preventive maintainence program with the Wagner Manifold Lubrication System.

There is no "down time" for oiling and greasing. The entire job can be done while the machine is in operation. All grease fittings are accessible and grouped in manifolds to assure a complete job.

Further details will be supplied upon request.

WAGNER LITHO MACHINERY Metal Decorating Machinery Harborside Terminal, Unit 3, 34 Exchange Place, Jersey City, N. J. WAGNER LITHO MACHINERY WATIONAL STATIONAL STATIONAL







1. Inspecting the new 16-oz. Ballentine beer cans at Canco's Hillside, N.J. plant are W. H. Loll (1.), foreman of litho department, and Edwin Gartside, assistant foreman.

2. Pressman J. Dunbar adjusts plate as sheets are stacked for first pass through the Hoe press. New beer can was lithographed with gold, brown and white in the 16-oz. size.

After 20 years:

Canned Beer Still Booming

THE beer can, which flourished as prohibition faded, is booming still. The popular container was 20 years old in January, having hit an all-time production high for the industry of 6.5 billion units in 1954. This fact is of utmost importance to metal decorators, who make the can attractive with single and multi-color designs by offset lithography.

The surging market for throwaway containers was reflected recently at American Can Company, one of the world leaders in this field, when it received an order for a 16-oz. can

from one of its more than 70 beverage accounts - P. Ballantine & Sons.

Modern Lithography toured the Hillside, N. J. plant with Leslie Brunskil, plant manager, and William Loll, foreman of the litho department, to watch sheets for the 16-oz. can go through the giant presses and ovens for the first time.

Printed 20 Up

Several presses and coaters were utilized in printing the first batch, 20 to a sheet, with a gold, brown and white design. Mr. Loll and Edwin Gartside, assistant litho foreman at the modern Hillside plant, supervised the job, checking lacquer, impression and register as the sheets raced through the Hoe presses, 75 a min-

Completed cans roll down belts at American Can Co.'s modern Hillside, N. J. plant.





ute, and into the one-way ovens, where they were alternately heated and cooled for approximately 15 minutes. Bi-metal plates were used to lithograph the new cans.

Canco has attained its leadership not only by lithographing beer cans. Like some other metal decorators, it decorates containers for hundreds of products, ranging from fruit juice and coffee to tennis balls and blood plasma. Canco prints more than five billion such labels a year.

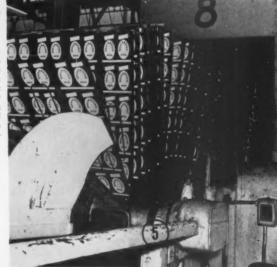
But the company always has considered beer cans one of the major sources of its business. William C. Stolk, president, in commenting on last year's record for the popular container, declared the record "dramatizes the tremendous growth in popularity of canned beer during its 20 years of existence.

Since January 1935, when American Can introduced the first beer can, trademarked 'Keglined,' the entire industry has produced a total of 42 billion cans for beer and ale."

He pointed out that the 200-millionunit increase in beer cans last year over 1953 was attained despite a drop in the overall packaged beer market, further emphasizing the growing consumer demand for the one-trip "convenience" type of container. Packaged beer represents 77 percent of

(Continued on Page 71)





5. Here's the Ballantine can sheet as it emerges from the oven after baking process on first pass. 6. Register of second is checked by Mr. Dunbar as plates are decorated at the rate of 75 a minute.



These Bearings add a big PUS to the special features of the HOE METAL DECORATING PRESS



R. () = & CO, INC.

910 East 138th Street New York 54, N.Y.
BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO
BIRMINGHAM • PORTLAND, ORE.



These are some of the antifrictional bearings used in the construction of each single-unit Hoe Metal Decorating Press — insuring maximum smoothness of operation, exactness of registration and long service life, with a minimum of maintenance, in combination with the many special features of these presses.

Hoe Straight-Line Feed speeds production, increases ease of operation. Preregister Plate Clamp Mechanism permits registration of color plates off the press while another job is running. Plate Lockup Mechanism requires only quarter turn of one wrench to lock plate on cylinder. Chain-Type Conveyor gives positive forward feed, helps preregister sheets from front to back.

A Hoe representative will be glad to furnish detailed information about these — and other — — exclusive features, which combine to make Hoe presses so outstandingly productive.

all beer sold, he stated, adding that 33 percent of it is marketed in cans.

In addition to lithography operations in more than half of its 60 plants in the United States, Canada and Hawaii, the enameling and decorating division maintains in each of the four divisions an art department to create designs and an engraving and plate department to produce the lithographic printing plates. These departments are located in New York, Chicago, San Francisco, and Montreal, Canada.

Such diversified activity is a far cry from the early days when English merchants turned to the infant business as a means of producing fancy tea decanters cheaply.

Canco has been lithographing on tin plate since its organization 54 years ago. In the early years, presses and techniques were crude compared with present-day standards. Small runs with stones on flat bed presses preceded use of the offset press.

Today, metal decorating at American Can is a highly organized process. Designs for some labels and trays are provided by customers, although most are developed in the company's art department, in cooperation with the customer.

First Step

Plates, ranging in size from 18 x 18 inches to 37 x 42 inches, are shipped to the lithographic department in packages of 1,120 and 1,344 sheets. After a base coating is applied and baked, the sheets are sent through one of the nine presses to receive a series of colors for each design. If the design permits, the sheets can be printed using several presses in tandem, with a baking period at temperatures ranging from 275 to 400 degrees after each application. A set of two or three presses is capable of printing approximately 7,000 labels a minute on some jobs.

Research Work

Average design contains four colors, but Canco has printed highly colored scenes requiring as many as 22 passes through the presses. More than 400 kinds of ink are stocked, including 90 shades of red.

Principal contribution of Canco's

research department to the art of metal decorating in the last 40 years have been concerned with improvement of the metal, coatings and varnishes. Development of lithography to withstand such things as alcohol and high pasteurizing temperatures in beer, for instance, has received much attention through the years.

Varnishes which are resistant to blistering, less thermoplastic and which prevent fading also have been formulated in cooperation with suppliers, the company reports.

This intensive research is defended by the can company's viewpoint that lithography is one of its most important operations. The accompanying photos show the first run at Hillside of the 16-oz. Ballentine can.*

Canco Sales Near Record

Sales totaling \$652,391,169 for 1954 were 1.2 percent below the record high of 1953, William S. Stolk, president, American Can Co., said in the company's annual report. An 11-day strike in January, 1954, forced the closing of 35 company plants, and unseasonable weather reduced demand for cans from processed food packers and breweries, he declared.

A new research and development center at Barrington, Ill., will be opened May 25.

Canners: Look to Your Labels

Ralph Head, Batten, Barton, Durstine & Osborn, New York, declared that anybody selling merchandise in today's supermarkets has a definite point-of-sale investment, "whether they want it or not, whether they know it or not," at National Canners' Association Annual convention Feb. 16-23, Chicago.

"Labels and packages today are point-of-sale pieces," he said, and asked "How long has it been since you took a long, hard look at your labels? Have you consulted with packaging experts on how they might be improved? Actually, your label or package is about the only point-of-sale material which you can hope to get into today's supermarkets."

Over 80 percent of the merchandise sold in grocery outlets is se-



Main entrance to the recently-completed Crown Cork & Seal, Can division's new litho plant and headquarters in Phila.

Crown Moves to New Plant

Executives and office workers moved Feb. 26-27 and limited production started March 1 at Crown Cork & Seal Co., Can division's new \$4,500,000 metal lithography plant in the northeast section of Philadelphia. Full production is scheduled for early summer.

All headquarters offices of the Can division will be housed in the new building, according to George W. Crabtree, vice president of Crown and general manager of the division.

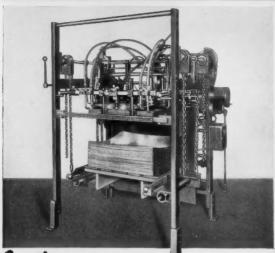
Five modern litho presses and ovens and five of the latest design coaters and ovens are installed in the plant, Mr. Crabtree said. The presses and coaters can process the largest metal sheets known.

lected by consumers, without assistance from sales people, he declared.

Lithographers among 25,000 representatives of the food processing industry attending the convention were: Calvert Lithographing Co., Detroit; Michigan Lithographing Co., Grand Rapids; Muirson Label Co., San Jose, Calif.; Piedmont Label Co., Bedford, Va.; Rossotti Lithograph Corp., North Bergen, N. J.; Stecher-Traung Lithograph Corp., Rochester, N. Y., and U. S. Printing & Lithographing Co., Cincinnati.

Also represented were: Continental Can Co., Heekin Can Co., Crown Cork & Seal Co., National Can Corp. and Armstrong Cork, Co., White Cap Co., whose closures are decorated by a Caspers Tin Plate Co. affiliate, Closures, and J. L. Clark Mfg. Co., Rockford, Ill.

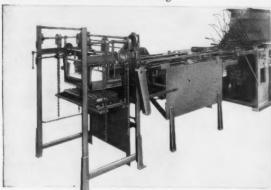
Dexter Machines for Metal Decorators



Continuous Reloading Metal Sheet Feeder

Automatically separates, picks up and advances metal sheets to feeding-in point of press at up to 85 sheets per minute. Handles sheets 36 x 36" maximum to 14 x 18" minimum, between 38 and 24 gauge stock. Feeders for larger sizes and heavier gauges also are available.

New loads are placed in feeding position without stopping machine. Conveys double sheets to reject tray with no break in production. Rubber suckers and drop rollers eliminate sheet scratching.

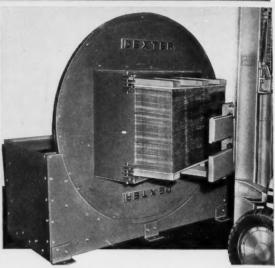


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Color Correction Process

By Philip E. Tobias

Edward Stern and Company, Inc.

THE problem of the color correction required in reproduction of so-called process color work, stems from the departure of the colors of press inks from ideality and the inability to obtain separation filters having the theoretically required spectral absorption characteristics. As anyone can observe by viewing the results obtained from an uncorrected set of separations, this departure is great in magnitude.

Historically, reproductions were first improved by hand modification of the compound color values to "force a match" between the composite colors obtained on the printing press and the original copy. The color artist refers to his experience or to a previously printed color chart. This method, while lacking the possible economy of instrumentation, and involving, to some degree, loss of photographic quality, is the only method which can guarantee maximum area-wise color fidelity or optimum compromise when needed.

The other methods which have been developed to answer the need for lower costs of color correction depend on the use of masking, either photographic or electronic (Time); or the electronic solution of the Neugebauer equations, algebraically expressing the appearance of a print in terms of the component dot areas (RCA-Interchemical).

We are proposing a new method of color correction which, we feel, when developed, can combine the fidelity obtainable by use of "experience" or empirical color correlation, with the speed inherent in electronic devices. It is by virtue of this use of empiricism that the electronic in-

ABSTRACT: A method of color correction has been developed based upon the observation that any color within the gamut of the four-color process printing inks can be reproduced by pairs of the chromatic inks plus black. The chromaticity coordinates of a color will vary with the two chromatic ink mixtures, whereas the luminance is affected by the amount of black used. A device is developed in which the empirical relationship existing between the chromaticity of a given copy and the amounts of each of the chromatic inks required for match is readily employed. The luminance of the copy then is matched by addition of black. Inherently, this process has the advantage of basic simplicity, allowing empirical compromises or corrections for distortion.

strumentation can be kept relatively simple.

Color Definition

The psychophysical attributes of a printed color may be defined by its red, green and blue reflectance. If the spectral response of each of the receptors used to measure these reflectances is derived from the eye response of the "standard observer", these red, green and blue reflectances will uniquely define the appearance of a color to this standard observer. A match is obtained between two colors when the specially defined red, green and blue reflectances (usually referred to as tristimulus values) of the two colors are respectively equal.

From the tristimulus values it is possible to obtain three other coordinates which are of primary significance to this process. The ratio of the red reflectance to the total (red and green and blue) and that of the green reflectance to the total, which

are designated x and y respectively, establish two variables which define the chromaticity coordinates of a color, thus fixing the hue and saturation of the color.

There remains a third independent variable, since the color has an attribute of luminance or brightness which can be affected by adding black to a pigment which produces the color or by altering the level of illumination. The luminance is measured by the absolute value of the green reflectance.

Thus, it is seen that a color may be uniquely defined by a set of three tristimulus values or alternatively by the two chromaticity coordinates and the luminance.

In the development of this present approach to the problem of color correction, the initial objectives set up were the use of printed composite process colors as a pool of empirical information and the development of a method to relate the individual color dot areas employed in the negatives or positives to the psychophysical appearance of the printed colors.

Relationship Possible

At first glance, it appears to be hopeless to mechanize the empirical relationships between the amounts of the four process inks and the chromaticity and luminance values. If, however, several conditions are imposed, these relationships can be readily instrumented.

It is evident that in a three-color printing ink system, such as magenta, yellow and cyan, all proportions of the printing inks taken two at a time, e.g., magenta and yellow, yellow and cyan, and magenta and cyan, define the entire chromaticity gamut of the system. The addition of the third ink to a binary mixture causes graying but does not alter the chromaticity gamut available from the binary mixtures.

It is also evident that graying or reductions in the luminance can be obtained by adding black to the binary mixture. One can now state that in this process of color reproduction all colors can be obtained by the use of binary mixtures of the



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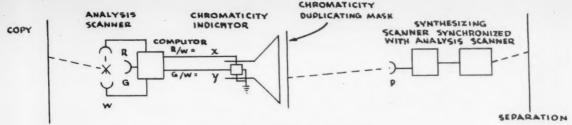


FIG. 1: Chromaticity Duplicating Schematic

process colors plus black. If one assumes a neutral black, it is seen that the binary mixtures determine uniquely the chromaticity coordinates x and y, defining the hue and saturation of the mixture and that black may be added to control the third independent variable of luminance.

If now one assumes a point on colored copy which is to be matched on the reproduction, it is obvious that such a match can be obtained by first equating chromaticity coordinates, through the proper choice of a binary mixture of the colored process printing inks; and in order to duplicate luminance, it is necessary to add black or an equivalent of black to reduce the luminance to the desired extent. At this time it is assumed that the colors to be reproduced are within the gamut of the printing inks.

Press Prints Used

If, therefore, one obtains a press print in a given printing process, using all possible tonal combinations of magenta and yellow, yellow and cyan, and magenta and cyan, each one of these tonal combinations will have x and y values measuring chromaticity which uniquely identifies the particular mixture. Conversely, a given value of x and y on the copy will be matched by these corresponding empirically determined dot areas of magenta, cyan and yellow in binary mixtures which possess the same x and y values. At any one point in this chromaticity coordinate system, the dot area of at least one colored ink must equal zero. The amount of black required to gray the reproduction to give it a luminance corresponding to the copy will then complete the color match.

This method of color correction as shown in Fig. 1, is relatively independent of the method of scanning Mask Is Derived

The quotients R/W = x and G/W= y may be obtained in a number of ways; one convenient method is to sum the outputs from logarithmic photometric amplifiers. These derived chromaticity values position the electron spot on the face of the kinescope tube. A "mask" derived from empirical printing data is used in front of the kinescope in a physical means similar to that employed in the flying spot method of television scanning or in the photoformer type of computer. The density of this "key mask" which will vary areawise is used to modulate the light from the kinescope face reaching the photocell. The density of a point on the key mask modulates

used; either flying spot or mechanical scanning may be employed. The light reflected from the copy is analyzed to obtain derivatives of the x and y chromaticity coordinates which are used to fix the horizontal and vertical positions of an electron spot on a kinescope tube. These x and y values can be obtained from the ratio of the red (R) and green (G) reflectances respectively, to the total reflectance (W). By the proper choice of filters and cathode surfaces, one can obtain R and G corresponding approximately to linear transformations of the tristimulus red and green; and W corresponding to the optical sum of the red, green and blue tristimulus sensitivities.

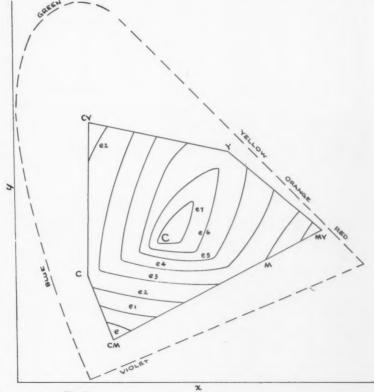


Fig. 2.

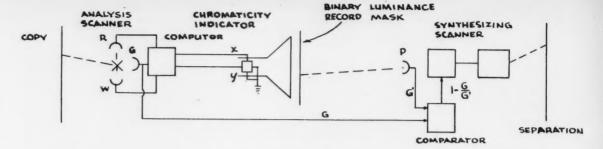


FIG. 3: Black Printer Schematic

the intensity of the light reaching the photocell p, which causes the intensity of the synthesizing light to vary. The intensity of this source establishes the local silver density obtained in the separation and, consequently, the final printing dot area. A separate mask would be used to correlate the printing dot area of each of the colored process inks with the chromaticity of the copy. Such a mask would have approximately the appearance shown schematically in Fig. 2.

This is, in essence, the familiar C.I.E. chromaticity diagram where

the polygon, c, cy, y, my, m and cm, bounds the chromaticity gamut obtainable using a typical set of printing inks. C represents white paper. If a five or six color process ink system is used, as for instance, indicated by the additional points, G or R, the area of the gamut of the inks can be increased. The binary mixtures then would be defined by m and R, R and y, y and G, G and c, and c and m.

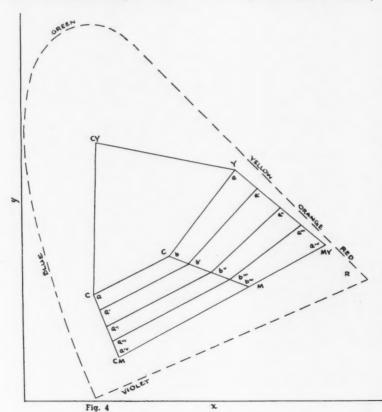
Binary Mixtures

In general, then, if the number of colors is more than three, the binary

mixtures include all possible sets of two colors which have adjacent chromaticities. For example, use of green in general, would result in mixtures of green and cyan, and green and yellow, but not in mixtures of green and magenta. Each point within the polygon has a characteristic optical density. The mask for printing a particular color printer. in this case magenta, can be represented by iso-optical-density lines which respectively correspond to different values of the particular ink being printed with all other binary combinations including the other inks

Thus, the line a b a₁ is an iso-optical-density line (constant value line) for 0 percent magenta, and the line aIV, bIV, aIV₁ is an iso-optical-density for 100 percent magenta, with varying quantities of cyan or yellow as the case may be.

At the present time, it is proposed that the mask be made by scanning printed halftone wedge specimens starting with, say, 100 percent magenta and all possible binary combinations with yellow and with cyan, to obtain a trace on the kinescope which corresponds to the iso-optical-density line for 100 percent magenta. This trace would be recorded by photosensitive material inserted at the mask position. The same is repeated for progressively smaller percentages of magenta in binary combinations with yellow and cyan. A series of traces corresponding to the iso-optical-density lines shown in this figure would be obtained. From calibration data, the actual value of the optical density required in the mask to obtain the desired printing dot area is known. These densities can be laid



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down along the traces of the isooptical-density lines by hand dyeing or possibly by photographic techniques. Due to the empirical value of this mask, the process can be made to have inherent tone correction, and can also correct for the distortions imposed by the fact that the printing press does not print the exact facsimile of the dot in the negative or positive.

Making Black Printer

To produce the black printer, it is proposed to use the instrumentation indicated in Fig. 3. The function of this is to make a comparison between the reflectance of the copy at a given point and the reflectance of the binary mixture of printing inks which produced the chromaticity is used to modulate the light from the kinescope. The computer determines the function 1 = G/G', where G = greenreflectance from copy and G' = greenreflectance from binary mixture. This gives a direct function of the black required. Fig. 4 shows schematically the mask which would be used for the black printer. The iso-opticaldensity lines e, e1, e2, etc., or lines of constant luminance, are determined experimentally. Each spot which has an optical density corresponding to the luminance of the binary mixture of printing inks which gives that chromaticity, is given by x and y coordinates.

Flexibility

At this point, one might consider the possible flexibility of this process for color compromise and arbitrary change. Colors which fall outside the polygon in Fig. 2, are beyond the gamut of the standard printing inks and cannot be reproduced accurately. This condition occurs, for example, if the color G is to be matched, which is in a range of saturation beyond the limits of mixtures of the inks C and Y. There is then a choice presented of matching the hue but not the saturation and the luminance, of obtaining maximum saturation and luminance without regard to the hue. or of compromising to any desired degree on luminance, saturation and hue. Depending upon the nature of the copy, it will be preferable to adopt one or the other of these expedients. This is readily accomplished by providing at the desired point outside the polygon, on each of the chromaticity duplicating masks and also on the binary luminance record mask, arbitrary densities which control the particular chromaticity and luminance to be obtained in reproducing that color on the copy. Use may also be made of attenuation in the x and y channels to obtain proportionate compliance to the printing ink polygon. Given colors may be identified by areas on the masks. These colors can then be modified in the reproduction by revision of the optical densities normally used. Thus one can project the possibility of cranking in the specification that, the "orange of the lady's dress should be changed to green."

Another procedure for which this process seems well suited is to discriminate among colors which are quite similar. Thus, in map reproduction, wall paper, and linoleum designs, lines and areas may be drawn in various colors and values which it may be impossible to separate photographically. Even similar colors will have different chromaticities. One can employ a chromaticity duplicating mask as in Fig. 2, in which all of the area is opaque except those areas corresponding to the x and y of the color to be recorded. Any color which does not have a chromaticity falling within one of the areas of transparency will not be reproduced. To prevent confusion, it should be brought out that for this application, no process mixtures are involved. This application to map separation has been studied under contract with the Engineer Research and Development Laboratories at Fort Belvoir.

In conclusion, it should be pointed out that this process of color correction is offered as an approach, not as a finished piece of equipment. It is believed that, upon future development, it may prove to be accurate, simple in construction and flexible in scope.

DISCUSSION

Mr. Rydz (Radio Corporation of America): If I understood you correctly, you are assuming that black alone has luminance.

Mr. Tobias: No, not black alone, but black alone can be used to modify the luminance that you obtain using the binary mixtures. In other words, by the addition of black, you reduce luminance without appreciably affecting chromaticity. That of course assumes that the black makes little contribution to either purity or to hue of the binary mixtures, which is probably a valid assumption.

Mr. Rydz: You would then have the same amount of black in all portions of the color solid at some definite level.

Mr. Tobias: I don't quite get it.

Mr. Rydz: Well, at some level in the third dimension of the color solid, your device would put in a certain amount of black, which would hold true for the whole plan.

Mr. Tobias: No, that isn't true, because you see we match chromaticity by the mixture of a pair of the process inks. Now, this pair of process inks will have a given luminance, which we must modify by the addition of black to have it match the luminance of the copy or be proportioned to it.

Mr. Rydz: So you need a varying black generator throughout the entire

color solid.

Mr. Tobias: That is correct.

Mr. Rydz: What justification have you for saying that "G" represents luminance? Under what sort of filter system will you have G represent Y

Mr. Tobias: Well, this is, of course, a matter of development. We propose to use a photo-cathode-optical filter system which will approximate a linear transformation of the tristimulus distribution functions.

Mr. L. D. Pollner: Phil, to get back to that last question, I think you said you assume that if you add black, you will not change your chromaticity but will change the luminance. Is there any experimental data to support that assump-

Mr. Tobias: No, there isn't. I think the assumption is probably valid within the order of accuracy that we are normally concerned with in color reproduction. In other words, we should be able to obtain a relatively neutral black of relatively high density and with probably low, I guess you could call it diffuse, reflectivity in order to prevent desaturation of the color to which it is added.

Mr. Rydz: How is R over W equal to X, or did I understand how you defined W?

Mr. Tobias: I defined W as being conveniently an optical sum of the sensitivities required, that is, the red, green and blue tristimulus transformations.

Mr. Rydz: So therefore the term should really be

Mr. Tobias: Yes.

Mr. Rydz: By the way, just one observation. It appears to me that this is a Neugebauer method. I fail to see any difference.

Tobias: I think there is a profound difference. The thing we are doing is equating the experience that we obtain on the printing press with the chromaticity

(Continued on Page 121)

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Graphic Arts—General

*METHOD FOR DEEP-ETCHING PRINTING PLATES U.S. Patent 2,692,828. K. M. Iversen and B. Eugen. Official Gazette 687, No. 4, October 26, 1954, page 854. 1. Method of making a printing plate, comprising the steps of forming a first image from a first coating of light-sensitive, etchant-resistant material on the face of a printing plate by placing a negative in contact with said coating, subjecting the plate to the action of light and developing the plate, applying a second light-sensitive, etchant-resistant coating to said plate of a material different from said first coating material, placing the negative in contact with said second coating and in registry with the first image, imparting a parallel motion between the plate and the negative along a closed curve while subjecting the plate to the action of light, and developing the plate so as to form a second image which overlies said first image and which has its marginal boundaries of all lines, marks and dots enlarged to the same degree throughout its area so that such enlarged boundaries of the second image extend beyond the margins of the first image, etching the plate until the enlarged boundaries of said second image fall off by being undercut up to close proximity with the edges of the first image, removing the second image with a solvent which does not remove the first image, and then effecting a final etch.

*Printing Pastes for Use on Plastic Sheets. U.S. Patent 2,686,736. J. M. Kuhn. Chemical Abstracts 48, No. 22, November 25, 1954, Column 14245-6. An oil-in-water emulsion printing paste prevents off-set printing on the back of the

plastic film, curling of the edges of the sheet, shrinking of the image, and fire danger from inflammable solvents. A monovinyl benzenemaleic anhydride copolymer (I) is dispersed in a terpene alc. (II) and solubilized with an aliphatic alc. (III) of 4-14 C atoms. The pigment is mixed with this solution. An emulsion is prepared by mixing the solution with water containing an alkyl amine or cyclic imine, such as morpholine. The emulsion is mixed with a vinyl latex, preferably vinyl chloride. The ratio of latex to pigment can vary from 2:1 to 1:2. The ratio of I to II ranges from 1:1 to 1:2. Only enough III is used to dissolve I.

ELECTRICAL EQUIPMENT MAINTENANCE. H. J. Mitchell. Printing Equipment Engincer 85, No. 3, Derember, 1954, pages 98-100 (3 pages). General methods for easier and better preventive maintenance are discussed. Subjects covered include (1) cleanliness, (2) inspection and (3) the maintenance of bearings, brushes, rings, and windings of motors used on printing presses.

*PROCESS FOR GIVING AN ILLUSION OF Solidity. British Patents 702,051 and 702,125. R. L. de Montebello. Photographic Abstracts 34, Part 4, 1954, page 263. Solidity can be perceived without stereoscopic vision if the object is strongly lit to give deep shadows and intense highlights. A monocular photograph is therefore arranged to be lit from behind and also from in front without special illumination. It is displayed in a viewing box with a deep projecting frame and gives the illusion of a solid object lit by a concentrated source concealed behind the frame. Two exposures are made from the same viewpoint, A with a concentrated source arranged to give deep shadows and intense highlights, and B with a flat wide source. Positive transparencies are made from the negatives and are mounted in a pack in the viewing box in the following order starting from the illuminant:-Glass; dense contrasty print from A; white chromated colloid layer (e.g., Eastman Kodak Transfax) showing an even white except for the extreme highlights which are transparent; print from B showing clear except for the densest shadows; thin print from B showing no detail in the highlights. The white layer forms a background against which the front transparency is viewed by reflection, in addition to the light transmitted by the highlights of all four transparencies. Alternative methods of producing the same effect in monochrome and color are described. A device for viewing the transparencies of this invention is described in British Patent 702.125.

COLOR TEST BOOTHS, P. R. Russell, Printing Equipment Engineer 85, No. 4, January, 1955, pages 29-30 (2 pages). A Color Test Booth, for color matching in the pressroom, is described as used by the Parthenon Press. The booth is large enough to accommodate the largest press sheet, and is fitted with fluorescent tubes, set at an angle of approximately 45° to the viewing surface. Three tubes of each of three colors (blue, green and red) and white are fitted to each side of the booth. Colored tubes are further modified by covering them with Rosco No. 15 (light red), No. 37 (dark urban blue) and No. 40 (medium green). Blue tubes are used for yellows, green for reds, red for blues, white for black, green or blue for browns, and red or blue for greens.

Photography, Tone and

*Pressure Prescreened Graphic Arts FILM. U. S. Patent 2,701,199. R. E. Damschroder and R. E. Stauffer. Official Gasette 691, No. 1, February 1, 1955, page 122. 1. The method of prescreening a photosensitive sheet having a flat silver halide emulsion layer on a flat support, which comprises desensitizing a halftone pattern in the flat emulsion layer by pressing against it in the presence of water a hard surface with a halftone pattern of raised dots with a pressure between that obtained with line contact on the laver from 10 pounds pressure on a small printing roller six inches wide and four inches in diameter and ten times this much pressure.

For Color Separations: Colored Flugrescents. F. C. Kalhoun. National Lithographer 62, No. 2, February, 1955, pages 30-32 (3 pages). The advantages and disadvantages of colored fluorescent lights for camera work are discussed. Advantages are: cleanliness and economy of light source, absence of filters from lens, copy can be observed under colored light, and lighting is even. Oil paintings can be photographed without the effects of excessive surface highlights. Disadvantages are: fluorescent lamps are not sufficiently strong for line and halftone work, the large filters attract dust and

may be damaged, and separations should be shot in a darkened room.

3-Color Offset. Modern Lithography 23, No. 1, January, 1955, page 38. The Eastman Kodak 3-Color System of lithographic reproduction is described. This system is intended for short-run work where plate preparation costs are a big factor. Color separations are made through a set of angled Kodak Grey Contact Screens and no handwork is performed. Special 3-color inks are used and pin registration throughout.

*Photomechanical Correction of Photographic Images. U. S. Patent 2,701,196. R. M. P. Conrad. Official Gazette 691, No. 1, February 1, 1955, page 121. 1. A method of producing a corrected photograph record from a photographic transparency, including the steps of disposing the transparency in a first plane, projecting into a part of a second plane, with the aid of a lens, a focused image of at least a portion of the transparency, disposing a photosensitive surface in a position spaced from the transparency on the side of the transparency remote from the second plane, illuminating the said part of the second plane to expose the said photosensitive surface to light projected therefrom through the lens and transparency, processing the photosensitive surface to produce a correcting mask, placing the mask in the aforesaid position, disposing a photosensitive recording surface in the said part of the second plane, directing light through the mask and the transparency, in the order stated, to project onto said recording surface with the aid of said lens, a focused image of the transparency illuminated through said mask, and exposing said recording surface to the so illuminated image.

Planographic Printing Processes

*Photographically Presensitied Metal Plates. British Patent 718,525. C. L. Jewett and J. M. Case. Printing Abstracts 10, No. 1, January, 1955, page 30. An ungrained base plate (e.g., degreased aluminum foil) is treated with an aqueous solution of a hydrophilic inorganic material (e.g., sodium silicate) and then coated with a thin coating of a water soluble light-sensitive diazo material of such a nature that, on exposure to ultraviolet light, the exposed portions will form a litho image firmly bonded to the base plates.

*STABILIZATION OF SYNTHETIC POLYMER-SENSITIZED ZINC LITHOGRAPHIC PRINTING PLATES. U. S. Patent 2,691,584.
J. G. Smith and L. M. Minsk. Official Gazette 687, No. 2, October 12, 1954, page 392. A light-sensitive photographic element comprises a zinc plate coated with a mixture of polyvinyl cinnamate containing from 60 to 100 mol. % of recurring polymeric units having the formula:

—CH₂—CH—O—CO—CH-CH—C₆H₅ and an amount of hydroquinone and an organic acid sufficient to prevent the formation only in the dark of insoluble reaction product immediately adjacent to the surface of the zinc plate.

*PHOTOMECHANICAL RESIST COMPOSITIONS. British Patents 717,708; 717,710-717,712 (A,C,D,E,) (Addition to British

Patent 695,197); 717,709 (B) (Addition to British Patent 695,262). L. M. Minsk, W. P. Vandeusen and E. M. Robertson (A,C,E,); L. M. Minsk (B); L. M. Minsk and E. M. Robertson (D). Printing Abstracts 10, No. 1, January, 1955, page 30. A. A substituted mononuclear quinone or a substituted or unsubstituted polynuclear quinone, the quinone being free from carboxyl groups, sulpho groups and basic nitrogen-containing and hydroxyl groups in the peri and ortho positions to an oxocarbonylic group, is used to increase the sensitivity of photomechanical resist compositions consisting of a solution of a light-sensitive cinnamic acid ester of polyvinyl alcohol or of cellulose in an organic solvent. B. A method of preparing cinnamic acid esters of polyvinyl alcohol is claimed. C. The sensitivity of these esters is increased by a compound of the general formula:

X\Y R-C-R1

(where R and R1 are aryl groups of the benzene series, X and Y are either hydrogen, or X is hydrogen and Y is a hydroxy group, or X and Y together represent O, NOH, NH or S. Examples are diphenyl ketone, 4:41-diaminodiphenyl ketone, 4:4-tetramethyldiaminodiphenyl ketone, diphenylmethane, 4:41-tetramethyldiamino-diphenylmethane, 4:41-tetramethyldiaminodiphenyl carbinol compound, and 4:41-tetramethyldiaminobenzophenone imide. D. A triphenylmethane dye is claimed as sensitizer. E. Anthrone, benzanthrone or azabenzanthrone compounds free of basic nitrogen-containing substituents and hydroxyl in a position peri or ortho to an oxo-carbonylic group of the compound, carboxyl and sulpho groups are claimed as sensitizers.

*Offset Printing Plates. U. S. Patent 2,687,373. W. Hering. Chemical Abstracts 29, No. 2, January 25, 1955, Column 1245. The stability of stored offset plates of aluminum, zinc, or their alloys is improved by neutralization of the acid residues left in the plate pores during anodizing, followed by application of a protective layer of MgO. The quality of the plates so prepared is better than that of Solnhof natural stone. Their surfaces are made porous by electrolytic treatment with low-voltage a.c. They are dipped for > 5 min-

utes in 16° Baumé NH₄OH and then submerged for 15 minutes in a constantly stirred mixture of 1 kg. calcined MgO (sufficient for 50 sq. m.) and 1000 kg. CCl₄ or CH₃-CCl₅. The plates are dried with ventilation at < 30° and coated with

a sensitive layer. After copying and developing, the MgO layer is cleared of unhardened sensitive material by the action of a fine jet of water. The porous metal is bared by swabbing with cotton wool.

*Composition for Lithographic Plate Coating. U. S. Patent 2,690,395. V. L. Gregory. Official Gazette 686, No. 4, September 28, 1954, pages 880-881. 1. An image forming coating for lithographic plates comprising a colloid selected from the group consisting of albumen, casein, and a soluble gum; a light sensitive material selected from the group consisting

of ammonium bichromate, sodium bichromate, and potassium bichromate; and a substance which will form an emulsion in water selected from the group consisting of dried milk, dried whole egg, and natural soyabean powder.

*DIAZO-SENSITIZED PRINTING PLATES. British Patent 708,446. W. Neugebauer, J. Barthenheier and A. Rebenstock. Photographic Abstracts 34, Part 4, 1954, page 241. Lithographic printing plates sensitized with diazonium compounds of formula

RN-Ar-N2-X1

where R is an aryl residue, R₁ is hydrogen or alkyl, Ar is a phenylene residue and X is an anion residue, which become printing ink acceptors after exposure, are fixed by washing out most of the unexposed diazonium compound and treating the residual unexposed diazo compound with a water-soluble azo coupling component containing one hydrophilic group with which it forms a hydrazo dye which will not accept greasy ink.

*DIAZO-SENSITIZED PRINTING PLATES. British Patent 709,453. Kalle and Co. A. G. Photographic Abstracts 34, Part 4, 1954, page 241. Photolithographic materials containing diazo materials which become oleophilic on exposure to light are, after exposure, rubbed with greasy ink in the presence of water and then coated with a water-soluble film-forming substance such as dextrine and exposed. The previously unexposed areas are rendered hydrophilic by exposure under the film and the image is thus permanently fixed. The film-forming substance is removed and the plate prepared for printing.

Paper and Ink

GE

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Alpha

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PRINTABILITY REQUIREMENTS FOR UN-COATED PAPER STOCKS. A. Glassman. Pulp and Paper Magazine of Canada 56, No. 3, Convention issue, 1955, pages 245-251 (7 pages) (Not to be reproduced without permission). Paper requirements by the modern printer for high speed printing of magazine, catalogue and label work include a high degree of runnability and impression tolerance, and a proper degree and uniformity of absorption as well as the usual need for consistency of basic weight and caliper across the web and from roll to roll, control of smoothness, gloss, color, etc. Examples of how poor runnability, lack of sufficient impression tolerance, over-absorption, under-absorption, and non-uniform absorption affect quality in high-speed printing are given.

THE EFFECT OF MOISTURE ON PAPER. H. Mack. *Polygraph* 8, No. 1, January 5, 1955, pages 6-7 (2 pages) (in German). The moisture content of paper in relation to air RH is discussed. Some absorption-distortion curves are given and moisture contents for typical fibers and papers.

TESTING THE PRINTABILITY OF NEWS-PRINT. B. Dahlström, I. Olsson and L. Pihl. Grafiska Forskningslaboratoriet 35, November, 1954, pages 21-30 (10 pages) (in Swedish). The physical properties of different kinds of newsprint have been measured as smoothness, porosity, oil flo-

(Continued on Page 131)



GET AHEAD OF COMPETITION on jobs requiring coated paper

Be among the first to use the new leader in the coated offset paper field. It's Glidden Alpha Protein processed coated paper. This new high solids coating material gives offset papers many superior qualities.

lt makes possible faster press runs, sizable savings in ink consumption and cleaner, sharper reproduction. Paper coated with Glidden Alpha Protein has minimum water and ink absorption, greater smoothness, stronger resistance to picking, higher opacity and more brilliance.

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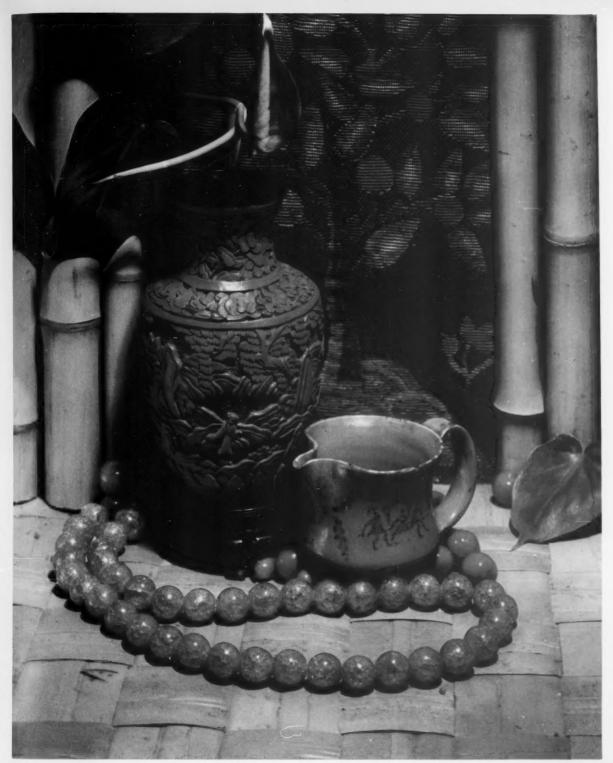
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I am interested in more information about Glidden Alpha Protein; and I would like the names of suppliers in my area.

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Lusterkote • Offset Enamel • Overprint Label C1S • Sebago Label C1S Fotolith Enamel • Silkote Offset

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The Alling & Cory Company

AND LING, MASS.

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BOSTON HIGH.

BOSTON HI

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EXPORT AND FOREIGN

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40 cities in Latin America and West Indies.

NEW YORK CITY (Export) Moller and Rothe, Inc.
20 countries in Latin America and West Indies.

NEW YORK CITY (Export) Muller & Phipps (Asia) Ltd.
Belgian Congo, Burma, Cylon, China, Hong Kong, Iceland,
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PHOTO BY LOUIS C. WILLIAM

WARREN'S

Lithographic Papers

Lusterkote · Offset Enamel · Overprint Label C1S · Sebago Label C1S Fotolith Enamel · Silkote Offset

Warren's LUSTERKOTE COVER provides a mirror-like glossy surface that contributes brilliance to the highlights and colors in lithographic reproduction. Now available with the lustrous finish on both sides of the paper.

Warren's Offset Enamel is a double coated paper for the printing of pictures by offset lithography. Double coating improves printability and uniformity, resulting in a higher potential of lithographic reproduction. Offset Enamel is available in glossy finish, Saxony finish, and dull finish. Also available coated one side only.

Warren's OVERPRINT LABEL is double coated on one side and is

eminently suitable for labels produced by offset lithography or by letterpress. This paper is pre-conditioned by an exclusive process.

Warren's SILKOTE OFFSET has the appearance of a wove offset but has a unique pigmented surface that gives more brilliant reproduction. It also offers a high degree of dimensional stability. Silkote Offset is available in Wove and Saxony finish.

Warren's FOTOLITH ENAMEL is a new quality of machine coated two side paper for the reproduction of halftones by offset lithography.

Warren's Sebago Label C1S is a new quality of machine coated label paper for offset lithography or letter-

Write for free booklet-"How Will It Print by Offset"

S. D. WARREN COMPANY · BOSTON 1, MASS.





Father & Son at Cincinnati Litho

Thomas E. Brinkman has joined Cincinnati Lithographing Co., Cincinnati, as assistant to his father, Harry E. Brinkman, company president. The younger Mr. Brinkman was graduated from Carnegie Institute of Technology in 1952 and recently completed 21 months' service in the U. S. Army as a project engineer, working on new plate-making methods for map reproduction.

Delsen to Rossotti Manager

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Rossotti Lithograph Corp., North Bergen, N. J., has announced the appointment of Louis A. Delsen as eastern division field manager.

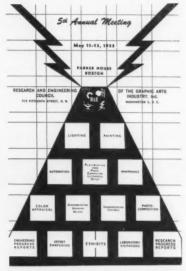
Mr. Delsen has been with Rossotti for the past ten years as sales representative in metropolitan and northern New Jersey. He will continue to service these areas in addition to supervising sales activities in Florida, West Virginia, eastern Ohio and western Pennsylvania.

LNA Plans for June Meeting

"Let Research and Education Improve Your Quality" will be one of the important topics at the annual convention of the Lithographers National Association June 20-23 in Lake Placid, N. Y.

The panel will be under the direction of the Industry Relations commitee, headed by James C. Strobridge, of Strobridge Litho, Co.

Another feature of the convention will be a program conducted by Charles Shapiro and Michael Bruno



Cover of the program for the fifth annual meeting, Research and Engineering Council of the Graphic Arts Industry, Inc. May 11-13, Boston. (see p. 52).

of the Lithographic Technical Foundation. Their approach will be that lithographers can improve their quality by applying information gained in tests originally intended to find means of increasing production. The LTF staff members also will explain and demonstrate the workings of the Press Inkometer developed by the LTF.

Edward F. Bowden, of Forbes Lithograph Co., Boston, is heading a committee planning a session on cost, accounting and financial management. General topic will be profit improvement.

Winning lithographed pieces in the LNA awards competition will be on display at the convention, according to W. Floyd Maxwell, executive director of the association.

Canadian Litho Expert Dies

Frank W. Stone, 78, one of Canada's leading lithography authorities, died March 13, in Toronto.

Mr. Stone joined a Toronto lithographic firm bearing the family name founded by his brother, William, while in his teens. His firm merged with Rolph & Clark in 1917 forming Rolph, Clark, Stone Ltd., and he served as president for 20 years before becoming chairman of the board, a position he held at the time of his death.

Baltimore Lithographers Move

The Falconer Company has recently moved from its four-story building at 414 Water St., to a modern one-story structure containing 55,000 square feet, at 6001 Erdman Ave., Baltimore. The two-year-old building was formerly occupied by Alexander Smith, Inc., carpet manufacturers.

Rotary Forms Group To Meet

A two-day conference scheduled for April 25-26, Hotel Statler, Cleveland, for rotary business forms printers sponsored by Rotary Business Forms Section, Printing Industry of America, will present speakers from companies such as: Orville Dutro and Son, Hamilton Tool Co., New Era Manufacturing Co., and Schriber Machinery Co. Open discussion and audience participation periods will be held. Registration fee is \$30, said Joseph Steir, Alfred Allen Watts Co., Belleville, N. J., president of Rotary Business Forms section.

Held Dies at 68

Albert C. Held, president, Herbick & Held Printing Co., Pittsburgh, died March 6 in Sarasota, Fla. Mr. Held was stricken with a heart attack while at his winter home in Sarasota convalescing from another heart attack suffered two months earlier.

In 1903, his father and Nicholas Herbick started the printing firm which bears their names and young Held joined them as errand boy and paper cutter. After graduating from Pittsburgh Academy he was made bookkeeper and later headed the sales department. He became part owner in 1913 when the firm was changed from a partnership to a corporation and was elected president in 1928, succeeding his father who had retired.

Herbick & Held has absorbed seven other companies in mergers, the latest being Eddy Press Corp., third largest printing firm in Pittsburgh.



Albert C. Held

Two years ago the firm marked its fiftieth anniversary and was awarded a \$1,000 prize and a Benjamin Franklin statuette for its anniversary promotion, including the book, "Sticks and Stones," detailing the company's history.

Meyercord to Build New Plant

The Meyercord Co., Chicago, manufacturer of decalcomanias, has announced purchase of a 23-acre tract of land in the Chicago suburbs as a site for a modern 1-story plant. Cost will be between \$2½ and \$3 million.

The new plant will contain 225,000 sq. ft. of space for manufacturing, office and warehouse. Present three buildings at 5323 W. Lake St., Chicago, have 140,000 sq. ft. of floor space.

Meyercord began making decals in a barber shop in downtown Chicago in the early 1890's, the present Lake Street site being occupied for more than 50 years.

Name '56 Printing Week Chairman

Reappointment of Floyd C. Larson, Director, U. S. Navy Printing Office, Great Lakes, Illinois as Chairman of the January 15-21, 1956 observance of International Printing Week was announced last month by Thomas P. Mahoney, president, Int'l Assn. of P.H.C.

The 1956 International Printing Week Stamp and Poster Contests will be announced shortly, Mr. Larson said. Practically all International and local Printing Week programs are in for considerable expansion in the 1956 observance in line with the special promotion to be given the 250th anniversary of the birth of Benjamin Franklin.

Management Group to Hear Dively

George S. Dively, chairman and president of Harris-Seybold Co., will speak to the Printing Management Seminar of Carnegie Institute of Technology's School of Printing Management, at a banquet April 30. His topic will be "Building Creative Management."

More than 200 graduates and friends of the school are expected to participate in the two-day meeting April 29-30, said Leslie C. Shomo, vice president and general manager, National Publishing Company, Wash., D. C., program chairman.

Portland Opens Estimators' Class

Instruction for litho estimating was begun in Portland, Ore., last month at the Benson Hotel. According to Glen W. Cruson, manager, Oregon Printing Industry, Inc., Arthur Markewitz, Bushong's, Portland, will instruct all sessions with course material from Lithographic Technical Foundation.

Big Move for Magill

Magill-Weinsheimer Co., Chicago, began March 15, the task of transferring their downtown plant in three multi-story buildings, to a new \$1,250,000 one-story building with 126,000 sq. ft. of floor space in suburban Lincolnwood. To maintain uninterrupted production the moving job will be spread over three and one-half months, with June 30 set as completion date.

First to move was the offset plate department; the offset pressroom, letterpress, bindery and other departments will follow. Each piece of equipment has been given a number and a date for its dismantling; also, a date for completion of the re-erection in the new location, Ray Gardner, vice president of manufacturing, explained.

Construction of the new plant for the 48-year-old Chicago firm began last June. New equipment installed includes a Miehle 76-inch sheet-fed rotary press, a Miehle 56-inch 2-color flat bed, a 31-inch Robertson camera and a Christensen varnishing machine, along with auxiliary equipment. Under study for early purchase, Mr. Gardner said, is a 76-inch 4-color offset press.

Most of the 450 employees will continue with the company, Mr. Gardner said. Some have arranged to move to the Lincolnwood area.

Company directors, early this year, promoted Mr. Gardner from superintendent to vice president in charge of manufacturing and also advanced John Kruft to vice president of engineering, in charge of mechanical operations and maintenance. Z. Wayne Adams was named executive vice president in charge of the company's new affiliate, Color Marketing, whose plant is at Cleveland, O. A new English process will be utilized there for manufacture of color chips for the paint trade, auto manufacturers, finger nail polish and kindred uses.

New York Lithographer Dies

Albert M. Konecky, partner in Associated Printing & Lithographing Service, New York, died March 12 at Beth Israel Hospital, New York. He was 58.

Sales, Credit Called Twins

W. V. Sutherlin, credit manager, Zellerbach Paper Co., San Francisco division, speaking on "Partners in Business: Sales and Credit," told the Printers Supplymen's Guild, San Francisco, Feb. 28, that sales and credit are Siamese twins.

"A sale is no good unless the seller gets paid for his goods, as everyone knows," he said, and continuing, "the first rule for any credit manager to learn is that every case and every customer is different." Mr. Sutherlin distributed samples of forms that Zellerbach uses, calling particular attention to the third copy of each invoice prepared especially for the salesman.

The dinner meeting, March 28, was followed by a tour of the San Francisco Chronicle plant.

Horace Reed Honored By 'Y'

Horace Reed, president, Niagara Lithograph Co., Buffalo, has been made a life member of the Equality Club of the Downtown YMCA, Buffalo. Mr. Reed is a past president of the Buffalo YMCA and now serves as head of its board of trustees.

Calvert President Resigns

Resignation of Robert A. Ritter, president, The Calvert Lithographing Co., Detroit, has been announced by William H. Sills, chairman of the board, effective March 15. Mr. Sills said that the duties of president have been assumed by Charles F. King, recently appointed executive vice president (See Modern Lithography, Feb., p. 95).

Fencel Named Sleepeck VP

Sleepeck-Helman Printing Co., Chicago, has elected Frank L. Fencel as vice president in charge of sales. Mr. Fencel has been with the company since 1943 as sales assistant to the president.

U. S . Printing Moves N. Y. Office

United States Printing and Lithograph Co., Cincinnati, has moved its New York office to larger quarters at 575 Madison Avenue. The entire 23rd floor is being occupied.



Young Lithographers Elect

Kurt Heinrich held transaction of Club business to a minimum and allowed the maximum for dinner and fun March 7, at the annual business meeting, Young Lithographers Club, New York. Cocktail hour in the Skyway Lounge was followed by steak or lobster dinner for more than 55 members.

Mr. Heinrich, retiring president, submitted the slate of new officers to the membership and, by unanimous vote, all were elected. They are: Maxwell Friedman, president; Erwin Bielitz, vice president, membership and publicity; Robert Lewin, vice president, program; Ted Fenn, Jr., secretary; and Jack Dubin, treasurer.

New members of the board of governors are: Richmond Vanden Heuvel; Richard Fenn; Arthur Sharples; John Ray; John Heim; and Gerard Urban.

Max Friedman, in his acceptance speech, praised the outgoing officers for their outstanding job of building membership to a high of 122.

Accordion playing, and piano work by professional Johnny Jarvis; impromptu piano selections by Mr. Bielitz; a men's millinery fashion show staged by a professional entertainer, employing models from the audience including Max Kisner, and Robert Rose; and a bell ringing act featuring Richard Fenn manipulating the A sharp and G flat tones concluded the party.

The April meeting will be held on the 13th, with Irving Gilman, director of projects, Institute of Mass Research as speaker.

Final meeting of the year will be in May, with a field trip planned tentatively for the metal decorating plant of Crown Cork and Seal Co., Philadelphia. New slate of officers for the Young Lithographers Club, New York, includes (l. to r.): Erwin Bielitz, vice president; Bob Lewin, vice president; Kurt Heinrich, out-going president; Maxwell Friedman, president; Ted Fenn, Jr., secretary; and Jack Dubin, tregsurer.

Forbes Litho Names Dodson

George E. Dodson, Atlanta, Ga., has been appointed to the gravure division of Forbes Lithograph Mfg. Co., Boston, John Osborn, president, announced last month.

Mr. Dodson's activities will be concentrated in the southeast, where he has been a resident for the past four years, as a sales representative.

He previously was associated with the Continental Can Co. in packaging sales.

Rossotti Appoints Sales Manager

Rossotti Lithograph Corp., North Bergen, N. J., has announced the appointment of Kenzie A. MacDonald as Central Division sales manager. Mr. MacDonald has been with Rossotti for the past five years as sales representative for the Chicago territory. The Central Division sales office will be located at 1328 South Wabash Avenue, Chicago.

Montgomery, Stewart Combine

R. G. Montgomery and Guy Stewart have joined forces to form Montgomery Printing Co., Inc., Houston, Tex. The new corporation, effective March 1, has the following officers: R. G. Montgomery, president; Guy Stewart, vice president; and Robert Montgomery, secretary treasurer. An integrated letterpress and lithographic printing and stationery service is offered the Houston area, the company said. Plant and offices remain at 246 Gray Ave.

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Naturally, the Hotel Ponce de Leon uses equally distinguished appointments for its guests' convenience. For example, a Strathmore letterhead paper was selected for stationery because of its expressive nature and distinction.

The many prominent institutions and firms which have chosen Strathmore Papers have very wisely realized that quality paper adds intangible importance to every message. They have made the Strathmore reputation for quality a part of their own. Ask your supplier to show you how your own letterhead design looks on Strathmore. You, too, will discover that a letterhead that says quality is a business asset!

STRATHMORE LETTERHEAD PAPERS: Strathmore Parchment, Strathmore Script. Thistlemark Bond, Alexandra Brilliant, Bay Path Bond, Strathmore Writing, Strathmore Bond. Envelopes to match converted by the Old Colony Envelope Company, Westfield, Mass. Strathmore Thin Papers: Strathmore Parchment Onion Skin, Strathmore Bond Onion Skin, Strathmore Bond Air Mail, Strathmore Bond Transmaster, Strathmore Replica.

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ADVERTISING REQUIREMENTS

Use of Safety Code Urged

The cartoon by Egly illustrates American Standards Association's recommendation that the newly-released code for Controls and Signaling Devices for Graphic Arts Presses be adopted throughout the graphic arts field. Whenever purchase of new equipment, major changes, or alterations in existing equipment are considered, the code should be applied, said Vice Admiral George F. Hussey, Jr., USN (ret.), managing director of the Association. (See MODERN LITHOGRAPHY, Jan., p. 65).

He stated that "The committee who developed this standard realized the psychological implications of safe equipment in setting up these standards; a man who appreciates a good machine, properly equipped to guard him from every personal injury will be free to apply his wholehearted energy to the operation of such a machine."

The code is for both publications

presses and for commercial presses, either sheet-fed or web-fed.

Push-button stations from the presses are required by the code to be arranged vertically in a single row, except in a commercial press where this arrangement may be impractical for convenient mounting; then the arrangement may be horizontal.

Control stations for publication presses should be provided with push



Gee, Boss! If we'd been using the Standard Safety Code for Controls and Signaling Devices, I'd never have made the front page.

buttons with the following designations and colors:

Green: A maintained-contact button marked "SAFE". When depressed, it prevents the press from being started, or when the press is moving, prevents further increase in speed.

Black: A maintained-contact push button marked "READY". Depressed, it establishes permissive circuits enabling the press to

be started.

Yellow: A momentary-contact button marked "FASTER". Starts the press and increases the speed as long as the button is held depressed.

Black: A momentary-contact button marked "SLOWER". Decreases the speed, eventually arriving at threading speed. Light Grey or Aluminum: A momentary-

Light Grey or Aluminum: A momentarycontact button marked "INCH". Allows movement at threading speed.

Red: A momentary-contact button marked "STOP". The stop button only shall be a long push button.

Control stations for commercial presses have a stop button and may have buttons for INCH, RUN (black), SLOW-FAST (black), and REVERSE (yellow).

Gamse Litho Moves

New address of Gamse Lithographing Co., is Pulaski Highway and 66th St., Baltimore, Md. The firm started moving machinery on March 14, and moved offices on March 28. Mailing address is P. O. Box 1977, Baltimore 3, Md.

Oxford "Paperama" at NPTA

Oxford Paper Co. will present "Paperama" at the National Paper Trade Association Convention, Waldorf-Astoria, New York, Mar. 28-31. In the display, collected from Oxford merchants and customers are magazines, bound books, labels, wraps and inserts for packaged products, advertising pieces, annual reports, booklets, business forms, calendars, catalogs, circulars, envelopes, fold-

ers, house organs, instruction manuals, pamphlets, price lists, time tables and others. Visitors are invited to see Paperama, Room 1000, Waldorf-Astoria.

Label for Returnable Container

For companies receiving returnable containers Labelon Tape Co., Inc., Rochester, N. Y., supplies large white pressure-sensitive labels on which is printed "Returnable Container — Do Not Destroy," or similar phrase. Other data may be printed on the labels, followed by spaces for writing-in necessary information.

The label sticks, without moistening, to any smooth, dry surface and can be written on with pen, pencil or crayon. The tape will withstand temperatures up to 250° F. (See p. 38).

West Va. to Spend \$100 Million

New plans, equipment and a new pulp and paper mill in central Pennsylvania will cost West Virginia Pulp & Paper Co. \$100 million dollars over the next five years, according to David L. Luke, Jr., president.

The new mill will probably be located at Tyrone, Pa., where the company operates a publication paper mill producing 145 tons a day. It is expected that the new mill will have a capacity of 300 tons hard white papers daily.

Craftsmen: On-to-Cincinnati

International Association of Printing House Craftsmen's convention, Aug. 7-10, Cincinnati, will include leadership training talks in the Educational and Technical Committee program, according to M. Price, program planner for the Committee. A Baby Sitters' Bureau will be operated as a function of the Ladies' Committee, and an "Over the Rhine" party will be held after the opening session, complete with checkered tablecloths, German band, barbershop quartet, and mustaches for Craftsmen to sport.



Salesman of the Year

John H. Johnson (r.), American Type Founders, Inc., won "The Distinguished Salesman's Award" for 1954 in a national contest sponsored by the Sales Executive Club. The top honor was given at a recent banquet at the Waldorf-Astoria Hotel, New York.

Mr. Johnson represents ATF in the lower west side, New York, and has been with ATF for eight years. He sold 11 Mann offset presses during the last nine months of 1954 in addition to many smaller presses, said Robert A. Tobias (l.), vice president in charge of sales, ATF.

Are You Using Atlantic

America's Best Selling
Genuinely Watermarked
#1 Sulphite Bond?

? WHY is a genuine watermark important?

It is important to printing quality. Solid ink areas or half-tones printed over a stamped "watermark" cause a mark showthrough. This does not happen with a genuine watermark. But, most important, a paper — to be genuinely watermarked — must be run much more slowly on the papermaking machines. The result — finer formation, stronger paper — a better sheet with better feel, snap and sparkle.

? WHY is Atlantic Bond called "The Printers' Paper"?

Because Atlantic Bond is made first for printability. The

greater, measureable bulk of Atlantic Bond means sharper impressions — smoother running — less make-ready time. This greater bulk — plus moisture controlled dimensional stability and micromatically accurate trimming — gives a paper that pleases both you and your customer.

? Are you now using Atlantic Bond?

There must be several reasons why Atlantic is first in sales in its own field — if you would like to see them for yourself just call your Eastern merchant for enough Atlantic Bond to run your own tests. We'll stand on the results.

Use



Atlantic Bond

MADE BY EASTERN CORPORATION, BANGOR, MAINE

Craig Named Sun Officer

Election of Jerry J. Craig as treasurer of Sun Chemical Corp., effective Feb. 15, was announced by Ralph C.



Jerry Craig

Persons, president of the Long Island City, N. Y., firm.

Mr. Craig has been associated with Sun since 1935, when he joined the accounting department. In 1946 he was placed in charge of all corporate insurance matters and in 1947, was appointed assistant treasurer.

NAPL Board to Meet in N. Y.

The board of directors of the National Association of Photo Lithographers will hold a two-day session in New York at the Hotel Statler, April 15 and 16.

New Type Distribution for ATF

A new plan naming 43 authorized, franchised ATF type dealers throughout the U. S. has been announced by R. A. Tobias, vice president in charge of sales, American Type Founders. This plan he said, will make ATF foundry type more readily available to all printers and specifiers throughout the country.

All ATF type dealers will carry ample stocks of all sizes and faces of ATF foundry type, selected to meet the needs of their local areas. Dealers will receive an exclusive ATF type franchise for a defined market area. The plan is effective immediately, according to Mr. Tobias, and by August 1st dealers will have been established in all the planned distribution cities in the country.

Buck Has Rededication Day

Buck Printing Co., Boston, rededicated its faith in the economic future of the "Commonwealth," March 4, with elaborate ceremonies at its general offices, 145 Ipswich St. Honored at the event were: Christian A. Herter, Governor of Commonwealth of Mass.; Sinclair Weeks, Secretary, U. S. Department of Commerce; John B. Hynes, Mayor of City of Boston; and Richard Preston, Commissioner of Department of Commerce.

Governor Herter inaugurated the second century of Buck Printing Co. by starting its new four-color offset press. The new Miehle press which will print a sheet 52" x 76", at speeds up to 6,000 impressions per hour is said to be the largest in the Boston

New White Opaque Developed

A new correction fluid for use in preparing copy for offset or other photographic reproduction processes has been developed by Battelle Institute, Columbus, O. An opaque, white substance, the fluid dries in a matter of seconds, forming a new white surface that is flexible and will not flake or crack, according to the Institute.

Research leading to the development of the fluid was sponsored by Battelle Development Corp., subsidiary of Battelle Institute. The fluid is now being made, and marketed in a brush-in-cap bottle, by Fototype, Incorporated, Chicago, under the trade name "Snopake."

Jones to Wisconsin GAA

David W. Jones has been named employee relations director of the Graphic Arts' Association of Wisconsin.

Mr. Jones will direct industry testing and training programs, a member placement service, preparation of economic and labor data, and coordinate efforts to improve the graphic arts curricula and facilities in Milwaukee technical and high

The addition of an employee relations' director to the GAA staff is a part of a long-range plan, started in 1952, to secure a healthier manpower future for the industry.

Brown-Bridge Shows New Kit

Samples of printing qualities in both letterpress and offset, on gummed printing papers are included in a new



demonstrator portfolio released by Brown-Bridge Mills, Inc., Troy, O.

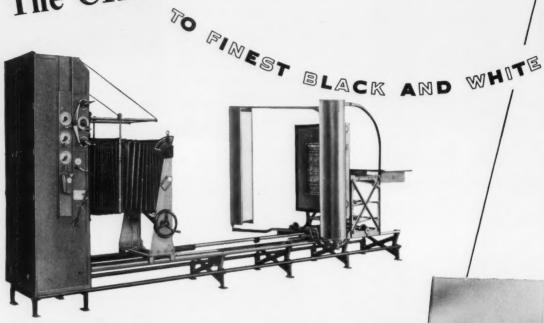
Offset work was done first in the production of the papers, establishing the general layout on the flat gummed sheets. Plates printed by letterpress were then positioned. To get color uniformity, the same inks used in printing the offset portion were also used for letterpress. Offset inks were reduced so they would print satisfactorily by letterpress.

Seven different sheets, 17" x 22", of gummed paper were selected as samples for the kit: Thrifty, Prosper, Amity, Stellar, Velvety Glu-Print (by letterpress only), and Kromekote (manufactured by Champion Paper & Fiber Co.). A Gumming Selector and Printed Surfaces Specifier, in tabularized form, offers an effective guide to selection of proper surfaces and qualities of gummed papers for offset lithography, line letterpress, halftone and process letterpress, metallic inks, embossing, overprint varnishing, spirit varnishing and gloss inks.

Heinrich to American Colortype

Kurt E. Heinrich, formerly with National Process Co. and D'Arcy Printing & Lithograph Co., has joined American Colortype Co. as a catalog and direct mail sales specialist. Mr. Heinrich is active in trade association work, and has been president of the Young Lithographers Association for the past two years.





CHEMCO Roll Film Camera Model F

Years-ahead engineering by Chemco makes this the last word in darkroom cameras! The operator rolls down any of three widths of roll film housed within the camera to the dial-indicated length he desires. New screen distance setting with expanded scale, quick, accurate focusing scales, convenient side-arm diaphragm control all help him to achieve precise, rapid production of high quality negatives.

Exposed film from the roll stock is cut with the externally located knife control, and the operator proceeds with shooting an entire series of exposures before entering the darkroom.

CHEMCO Powerlith Film

The 20% faster-exposing orthochromatic litho film, with complete development latitude, that substantially reduces exposure time under all conditions. Provides improved tonal gradation and balance between highlight and shadow for longer scale negatives...true shadow detail with flashing reduced 50% to 100%. Hard dot characteristics meet all requirements, with greater density and contrast for crisper line work and halftone dots...reduces opaquing time considerably. In regular and thin base, both roll and sheet.

CHEMCO Powerdot Developer

A new, long life developer for perfect results in line and halftone, using either Powerlith film or other conventional lithographic and plate-maker's films.



CHEMCO PHOTOPRODUCTS COMPANY, INC. GLEN COVE, N. Y.

ATLANTA BOSTON CHICAGO DALLAS DETROIT NEW ORLEANS NEW YORK

Craftsmen Hear Melvin Loos

The Tileston & Hollingsworth calendar, produced by 12 different printers, was the subject of a critique by Melvin Loos, manager of printing, Columbia University Press, at the March 17 meeting of New York Club of Printing House Craftsmen.

Subject matter for the 1955 calendar illustrations was New England "restorations." Included are scenes from Sturbridge Village, Mystic Seaport, Antique Automobile Museum, Edaville Railroad, and John Brown House.

Printers in New England, New York, Baltimore, and Philadelphia produced the calendar in offset lithography, letterpress, gravure and silk screen. Members of the Club of Printing Women also attended the session.

Sixty Years for C. P. Goerz

C. P. Goerz American Optical Co., makers of Goerz Dagor and Goerz Artar lenses, celebrates its 60th anniversary as lens makers in the U. S. this year.

The American Goerz Co. was founded in 1895 in New York. In 1954 new quarters at Inwood, Long Island, with modern manufacturing facilities were occupied. The company has expanded into fields of aerial photography and photogrammetry. Dr. C. P. Goerz, a son of the original founder, is president.



John L. Wiggins James J. Johnston

Hunt Advances Managers

Philip A. Hunt Co., Palisades Park, N. J., has announced the appointment of John L. Wiggins to western division sales manager, in charge of its Los Angeles and San Francisco branches. Mr. Wiggins has been manager of the Dallas, branch. James J. Johnston, Chicago branch, will manage the Dallas branch and will also be in charge of the Houston office.

Self-Advertising Entries Mailed

Joan Chmay and Carol Ann Mary of Miller Printing chinery Co. Pittsburgh, sponsor of the fourth annual P.I.A Exhibition Awards for Self Advertising, supervise mailing of 12,000 invitations to printers. The exhibition will be held and awards made at P.I.A.'s convention Atlantic City October, 15-20.



Donnelley Exec Retires

Herbert P. Zimmerman, vice chairman of the board, R. R. Donnelley & Sons Co., Chicago, retired March 1, after more than 53 years of service. After joining Donnelley in 1901, he headed the sales organization, became president in 1945, and in 1948 was made vice chairman of the board. He will continue as a director. Elliott Donnelley, grandson of the founder and formerly executive vice president, succeeds Mr. Zimmerman as vice chairman of the board.

Dry Coating Goes on Paper

An electrostatic process to deposit paper coatings in dry form directly to the paper base will be discussed by R. B. Reif, Batelle Memorial Institute, May 23, at the TAPPI Coating Conference, Hotel Statler, Cleveland. General design and operation of the coating unit, nature of the processing of the coating materials, and types of coating produced will be described by Mr. Reif. TAPPI Coating Conference will be held May 23 through May 25.

3M Sales, All-Time Record

Minnesota Mining & Manufacturing Co. reported an increase of five percent in total sales and a jump of more than 37 percent in net income over the previous year in its 1954 annual report to stockholders. Sales for 1954 were \$230,890,482 and net earnings were \$24,624,225.

Pressure sensitive and gummed tape products including decorative ribbons, accounted for about 37 percent of sales. Among additions to plant in 1954 was a lithographic plate plant at Hastings, Minn.

Mack Associates, New Firm

Norman A. Mack has announced formation of a corporation known as Norman A. Mack Associates, Inc. with headquarters located at 48 Rippowam Road, Stamford, Conn. Purpose of the corporation is to manufacture new products developed by Mr. Mack, one of which will be the DIS-COVER (disposable dampening roller cover) for which patents are pending. DIS-COVER is the trademark used to designate the first of the new series of fabrics for application to conventional dampening rollers. Manufacture of the DIS-COVER is now proceeding on schedule and the product will shortly be released for distribution, said Mr. Mack.

The DIS-COVER is a finely knitted, lint free, seamless tubing chemically impregnated to make it highly water receptive. This material will sell for approximately one-half the cost of other types of dampening fabrics, it is claimed.

Mr. Mack also has patents pending on an improved dampener base material and hopes to introduce this improvement late in 1955.

On January 1, 1955, Mr. Mack resigned his position as technical director of Printing Developments, Inc., division of Time, Inc. He had been stationed at Springdale Laboratory in 1953 and 1954. He obtained patents for the Speed-Jacket machine for Roberts & Porter, Inc. during his many years as their technical director.



3 dependable papers at low cost from Hammermill

WHIPPET BOND, Deeplake Index and Deeplake Post Card are three dependable papers of Hammermill manufacture. You can use them with confidence, even though they are low in cost. Thousands of printers use these papers to make their economy jobs look better.

1 Easy-feeding, fast-running Whippet Bond offers unusual brightness and outstanding strength characteristics. Where the job calls for a modestly priced sheet, as in business forms and sales literature, you'll do well to choose Whippet Bond. It's an excellent value in unwatermarked bond. White and six like-sided colors.

2 Need a uniform, low-cost index paper? Hammermill-made Deeplake Index in white and six colors will provide the results you want for filing cards, and for display cards and advertising folders. Inexpensive, yet surprisingly strong, it has a well-sized surface which takes erasures without scuffing.

3 For return mailing cards or for public utility bills, Deep-

lake Post Card is a strong, cream-white card stock that combines lively snap with low price.

All three of these big-value grades come in attractive, weather-tight packaging that preserves the paper's balanced moisture content for trouble-free pressroom operation. "Drop-front, shelf-service" cartons provide easy storage and handling.

And all three are available from your local Hammermill Agent. He'll fill your orders promptly. Call him soon. Hammermill Paper Company, East Lake Road, Erie 6, Pa.



Ryan, Gra. Arts Mach. Link

E. G. Ryan has resigned as regional manager, Web Press division, American Type Founders, Inc., and has



E. G. Ryan

transferred activities back to E. G. Ryan & Co., Chicago. He will handle sales of sheet-fed and roll-fed offset presses and allied equipment, specializing in web offset presses manufactured by Graphic Arts Machinery, Inc., Mt. Vernon, N. Y. This culminates nearly twenty-five years' association with the original Webens-dorfer-Wills Co. and its successor American Type Founders, Inc.

George Hantscho, president, Graphic Arts Machinery, Inc., was superintendent of the original Webendorfer-Wills Co. and later general factory manager for the Web Press division, ATF.

Established in 1914 by E. G. Ryan, E. G. Ryan & Co. became sole midwest representative for Webendorfer-Wills Co. in 1932. After 1938 when ATF bought Webendorfer-Wills, Mr. Ryan was made district manager of the Web Press division.

Atlantic Coast Unit Forming

Printing House Craftsmen have completed study prior to forming an Atlantic Coast Society, according to representatives of the Second and Fourth Districts of the International Craftsmen's Association. The two districts include 15 clubs in New York State, New Jersey, Pennsylvania and other Atlantic areas extending as far south as Virginia. Total membership is more than 3,000.

The Atlantic Coast conference, Berkeley Carteret Hotel, Asbury Park, N. J., April 29-May 1, will be presented with a constitution and by-laws for ratification.

Acting Society co-chairman Edward Blank, New York, and John Osias, Richmond, presided at a meeting in Philadelphia, Feb. 5, to map plans for the conclave in Asbury Park.

IPW Poster and Stamp Contest

International Printing Week, Jan. 15-21, 1956, will feature a new poster contest and the usual stamp contest, according to Floyd C. Larson, chairman.

The poster contest is an opportunity for design-minded people in the graphic arts industry to gain real recognition for their efforts, he said. Sponsored by the Int'l Association of Printing House Craftsmen, Inc., this contest will result in the selection of a prize winning poster to be shown in the U.S. and Canada.

The entry receiving first place award in the stamp contest will be the official emblem of 1956 Printing Week. Winners will be named at the Cincinnati convention in August.

Rules for both the stamp and poster contests were released last month by Floyd C. Larson, International Printing Week, U.S. Navy Printing Office, Great Lakes, Ill.

Canadian Regulations Reviewed

Walter Soderstrom, executivesecretary, National Association of Photo-Lithographers, in his March newsletter includes a reprint of the Department of National Revenue, Canada, on "Consolidated Departmental Regulations Governing the Marking of Imported Goods." Mr. Soderstrom said the reprint was distributed to satisfy many requests for regulations on imported lithographic material.

Texas Conference Planned

Houston Litho Club and the Graphic Arts Association met in a joint session, April 5 to view a demonstration of Miehle's Litho-Print. Announcement was made of the Texas Conference on Printing Management Problems, Plaza Hotel, San Antonio, April 23-24.

Baker Is Harris PR Manager

Fred W. Baker has been named to manage a newly established public relations department of Harris-Sey-



Fred W. Bake:

bold Co., George S. Dively, chairman and president, announced last month.

Mr. Baker, previously advertising manager for Harris-Seybold, will now coordinate, develop and promote the company's overall public relations program. He has been with Harris-Seybold since 1949, and previously was associated with Cleveland Electric Illuminating Co. and Penton Publishing Co.

West Coast Gets Miehle Press

Abbott Kerns and Bell Co., Portland, are installing a new two-color Miehle offset press, a No. 41. Novel features of the press include the separation and lifting by air alone of stock from .002 tissue to .025" board. Stock pile is raised and lowered by power and one control makes all adjustments for sheet width. Maximum sheet size is 30" x 39" and a top press speed of 6800 sheets per hour is reported.

Baltimore Hears John Freeman

Graphic Arts Association and Maryland Industrial Marketers sponsored a joint membership meeting March 15, Lord Baltimore 17, tel, and heard John C. Freeman, president, National Industrial Advertisers Association speak on "Industrial Advertising."

Members of both clubs reviewed the Printers' and Lithographers' Self Advertising Exhibition before the dinner meeting.

Here's the way FALPACO helps to turn a beautiful display... into a sale!

First—this colorful car card* captures the attention of thousands of prospects.





Sa

acc

for

ac

ce

and then...



the same card...now slipped into a display case at the point of sale...reminds and stimulates the customers into buying the product.



The investment of fine artwork and printing —on Falpaco—pays off in sales.

On your next job-specify FALPACO

Distributed by authorized paper merchants from coast to coast.

*Produced by offset lithography on Falpaco (coated one side for offset in full color with a brilliant border of silver) by Industrial Lithograph Co., Brooklyn, N. Y.

FALULAH PAPER COMPANY



New York Office-500 Fifth Avenue, New York 36 • Mills: Fitchburg, Mass.

Safety Council Cites Fraser

Fraser Paper, Ltd., Madawaska, Me., qualified for an honor award from the National Safety Council, Chicago, for significantly lowering its disabling injury rate resulting from accidents in 1954 below the average of the mill's and the industry's rates for 1951-1953. Fraser leads the group of its class receiving certificates of achievement for reducing injuries, in the contest. Last year it reduced the frequency of its injuries by 85 percent better than the average and the severity by 99 percent.

Lawson Adds Mid-West Man

Frank D. LaZelle will be responsible for sales and service of Lawson cutters, rapid 3-knife trimmers and multiple head drilling machines in northern Ohio and eastern Michigan, it was announced by E. P. Lawson Co., Inc.

After service in the U.S.A.A.F., Mr. LaZelle became sales manager of Browning Crane and Shovel Co. and prior to his association with Lawson, was vice president and secretary of Industrial and Contractors Equipment Corp. Mr. LaZelle will be based in Cleveland.

Hayes Feted by Levy

Employees of Max Levy and Co., Philadelphia, manufacturers of half-tone screens and process cameras, gave a party Feb. 10, for Howard Hayes, superintendent of the camera department, on his 50th anniversary with the firm. It also marked Mr. Hayes' 75th birthday.

Permacel in Dallas Moves

The Dallas, Texas division office and warehouse of Permacel Tape Corp., New Brunswick, N. J., has moved to 9000 Denton Drive, Dallas 20, Texas, it was announced by George A. Fitzgerald, industrial sales manager.

The new office will handle the complete line of 180 different kinds of industrial tapes manufactured by Permacel in servicing its customers in Louisiana, Oklahoma, Arkansas, Texas, New Mexico, Colorado and the western part of Kansas.





I R Scherrer

errer Charles Me

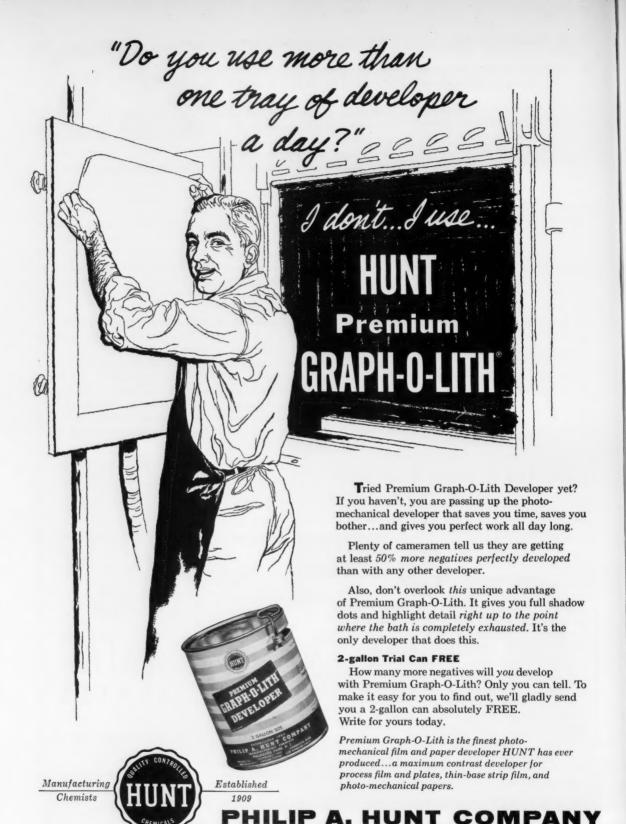
Ideal Adds California Men

J. R. Scherrer and Charles Machin have been appointed new sales representatives for Ideal Roller & Manufacturing Co. in the Los Angeles area. They will make their headquarters at Ideal's Huntington Park, Calif. plant. Both men will be working under Robert H. Neale, manager of Ideal's Pacific division.

Rapid Roller Names Taylor

Martin M. Taylor has been appointed branch manager of the Newark N. J. office, Rapid Roller Co., it was announced recently. Mr. Taylor has been associated with the company since 1931 in the selling field in various territories, including New England. He replaces A. D. Kirkpatrick.





PALISADES PARK, N. J.

Calendar Novelties at Show

Calendar manufacturers composing a large part of Advertising Specialty National Association's membership, showed intriguing new products at the spring show, March 13-16, in Chicago.

A hot pad for the kitchen range imprinted with a calendar, a "perpetual" pocket calendar dial giving day of the week for the next quarter century, calendar rulers, calendars imprinted on pencils, and a "scribble reminder" desk pad with space for "doodling" alongside the calendar. Playing card and greeting card lithographers also displayed their products.

Among litho houses represented were: Goes Lithographing Co., Chicago; Ketterlinus Lithographic Mfg. Co., Primos, Pa.; Jos. Hoover & Sons Co., Philadelphia; John Baumgarth Co., Melrose Park, Ill.; National Detroit Publishers, Detroit; Oval & Koster, Indianapolis; Colorama, Inc., Melrose Park, Ill., and Minute Man Line, Boston.

Dismissal of government charges of trade restrictions was hailed by members of the Association at the business meeting, but there was a feeling that the March 10 report of government findings by the Federal Trade Commission did contain some distortions. The Commission issued a "cease and desist" order on alleged charges of conspiracy to fix prices, but dismissed more than a dozen other specific charges in the original complaint filed in 1952.

"The government press release," Mr. Yaw, ASNA president, said, "buries the charges of which the Association was absolved, in several short sentences near the end of the story, and makes capital of a limited ruling prohibiting joint action to regulate sales according to manufacturers price list."

Minneapolis Suppliers Merge

Litho Impression Products, Inc., Minneapolis and T. K. Gray, Inc., formerly known as the T. K. Gray Drug Co., Inc., have merged. R. E. Remund will continue as president and general manager, and Leo C. Holzinger has been elected vice

president. Thomas Sicora has joined the company as a sales representa-

St. Louis Has "Think" Group

Advertising Ideas, Inc., a group of 12 men and two women meet in St. Louis, Mo. each Monday night to "think creatively."

So far they've come up with a game printed in four colors, a good promotion piece; sketches for a new calendar; a door decoration for the Christmas season; and a TV gimmick.

The group meets after business hours in the board room of the Associated Printers & Lithographers of St. Louis. When an idea is thoroughly thought out, an artist member of the group makes the sketch, then the finished art work. Any member of the group who thinks he can sell the idea takes the finished art work and makes the sales pitch to the company agreed upon by the group. Profits? The group asks only enough to cover the expense of art work and promotion. The 12 were part of a class in "Ap-



whenever you need Service or Supplies

Success in most things depends a lot on making the right move — that's why so many successful companies in the graphic arts are moving to Besco. They know that Besco is a reliable source for supplies and equipment. They know that Besco service is prompt, cheerful and accurate. They know that "BESCO means the Best".

BRIDGEPORT ENGRAVERS SUPPLY

BRIDGEPORT 2, CONNECTICUT

BOSTON: 287 Atlantic Avenue

CLEVELAND: 1051 Power Avenue

NEW YORK: 525 W. 33 Street . CHICAGO: 900 N. Franklin Street

plied Imagination" taught by Frank C. Rauchenstein, Cavanaugh Printing Co., in 1954, to encourage creative people to think of new ideas to improve their own businesses.

Members of the group are: John Boland, salesman, Nies-Kaiser Printing Co.; Don Nies, president, Nies-Kaiser: Arthur Lander, office manager, Lander Bookbinding Corp.; Fred H. Decker, salesman, Reliance Engraving Co.; Arthur Lampe, salesman, The Geo. D. Barnard Co.; Bob Kilgour, salesman, Moss Printing Co.; Donald Eshenroeder, sales manager, Bardgett Printing & Pub. Co.; Ella Finklang, assistant manager, A. S. Werremeyer Printing & Stationery Co.; Milton Mild, Litho Art supt., Western Printing & Lithographing Co.; Conrad Stuhlman, National Sales Mgr., Western Printing & Lithographing Co.; Dorothy Mundschenk, Art Director, Western Printing & Lithographing Co.; Bob Johnson, president, Johnson, Inc., printers; Frank Rauchenstein, president, Cavanaugh Printing Co.; and Fred E. Winsor, executive vice president, Associated Printers & Lithographers of St. Louis.

Int'l Paper Has Higher Sales

Sales of \$683,049,560, 1.4 per cent above 1953, were reported for International Paper Co. in the 1954 annual report. Earnings represented a 15 per cent increase over 1953; however, output of paper and pulp was off slightly from the previous year.

John H. Hinman, chairman of the board, said that if the current demand for paper products is maintained throughout the year, 1955 production should be better than 1954.

Kassing to Nepco Planning Dept.

Burt L. Kassing, former director of process and product development, Ne-koosa-Edwards Paper Co. has been named manager of the company's new production planning department. Mr. Kassing came to Nekoosa-Edwards in 1950. His experience before joining Nekoosa-Edwards included superintendent at Hammermill Paper Co., a professorship at New York State College of Forestry, and general manager of production at Ecusta Paper Co.

Bingham Bros. Advances Two

David S. Hamilton has been appointed an advisor and consultant to Bingham Brothers Co., New York.





D. S. Hamilton

John E. King

He will make his headquarters at Cambridge, Mass.

John E. King has been appointed manager of the Cambridge branch. Mr. King was formerly associated with Osgood Globe Roller Co. in Boston, joining Bingham Brothers Co. in 1950. For the past three years he has been assistant manager of the Cambridge branch.

Durochrome Has New Plant

Durochrome Decalcomania Co., manufacturers of ceramic and other type decals by offset and silk-screen, has opened a research laboratory and plant on Rio Vista Ve., Los Angeles, according to James W. Gammon, president.

Crocker Buys Carlisle Div.

H. S. Crocker Co., San Francisco, bought the stationery division of A. Carlisle & Co., Fresno, Calif., last month. Crocker, one of the West's largest lithographers, gained 15 employees by acquiring Carlisle's Fresno retail store.

Survey of the Printing Industry

"(R) evolution in the Printing Industry," is a new book published as a result of a group project by students at Harvard's School of Business Administration. The report is spiral bound, 88 pages, with graphs, charts, tables and a bibliography.

Section one, entitled "Printing, Past and Present" gives historical background, growth and trends, management attitudes, etc.

Section two discusses new developments, reporting on phototypesetting and photocomposition, platemaking and engraving, color reproduction, and others.

Carnegie Plans Offset Clinic

Leaders in graphic arts education, national trade organizations and industry have scheduled their annual meetings together at Carnegie Institute of Technology, July 3-8.

The Conference of International Graphic Arts Education Association has planned sixteen clinic laboratory sessions conducted by the Carnegie Tech Printing Management faculty and leaders in the industry. Technical sessions will cover the composing room, the press room, offset lithography and design according to Homer Sterling, professor in Carnegie's School of Printing Management and conference chairman.

Sessions to discuss problems of graphic arts education from plant training programs and vocational schools through graduate college courses have also been planned by Robert H. Caffee, program committee chairman, Educational Council of the Graphic Arts Industry, and president, William G. Johnston Co., Pittsburgh.

Elmer G. Voigt, president, Educational Council, and vice chairman of the board, Western Printing and Lithographing Co. stated:

"We have looked forward for some time to bringing the industry and teachers together at a national conference to discuss mutual problems leading to the improvement of graphic arts education and training."

Carnegie Tech has made Morewood Gardens, recently acquired women's dormitory available to house conference members and families. The building will also provide lounge, dining, recreation and meeting-room facilities.

Judging Complete in LNA Contest

Entries in the 5th Lithographic Awards Competition and Exhibit, sponsored by the Lithographers National Association, totalling 1,700 pieces were judged during the week of March 14, in Chicago.

Vernon K. Evans, chairman of the Lithographic Promotion committee, and C. A. Nordberg, chairman of the Awards & Exhibit committee, said that winners in the Competition will be announced at the Opening Exhibit on May 9, at Marshall-Fields.

The judges were headed by Frederick J. Wachter, vice president, Erwin, Wasey and Co., Chicago. The panel of Judges rated and scored direct mail, point-of-purchase material, posters, magazines and house organs, greeting cards, decalcomanias, metal lithography, calendars, art prints, bank and commercial stationery, packaging material and many other offset lithographic specimens.

Following the Opening Exhibit, awards winners will be seen at the 50th annual convention of the Lithographers National Association, June 20-22, Lake Placid Club, Lake Placid, N. Y.

Midland to Sell Oxford Line

Oxford Paper Co. and Oxford Miami Paper Co. have appointed Midland Paper Co., Chicago, as distributors of their line of printing and converting papers.

L. A. Offset Costs Up

Production costs in the last quarter, 1954, rose from 1954's 12-month average in every category of graphic arts operations checked by Los Angeles PIA including offset, letterpress and bindery. Following are the Oct.-Nov.-Dec., 1954, hourly costs for offset followed by the preceding 12 months' costs in parentheses:

Negative preparation, \$9.91 (\$9.70); Camera, \$13.83 (\$11.73); Vacuum Frame, \$10.09 (\$9.86); 10x15 Multilith, \$7.44 (\$6.69); 14x20 one-color, \$9.29 (\$8.57); 17x22 one-color, \$11.06 (\$10.87); 22x29 one-color, \$12.76 (\$12.14); 22x34 one-color, \$21.60 (\$19.73).

The all-inclusive cost is the sum total of all costs including labor, depreciation, rent, utilities, administrative and selling expenses, insurance, taxes, supplies, repairs and maintenance, and spoilage with the correct proportion of each cost factor charged to each type of machine or operation. It does not include, profit, markup for buy-outs, or interest on investment. The increase results from contract renewals at higher rates for all types of printing plant labor.

Alum-O-Lith Opens California Plant

Alum-O-Lith, Inc., has opened its new plant. offices and laborators containing 17,000 square feet of floor space, in El Monte, Calif. Automatic production equipment enables the plant to produce more than one million plates a month. Elmer Deal, technical director said.



Wide Use for Polyurethane Seen

Dayton Rubber Co., Dayton, Ohio, will be producing by the end of this year, ten million pounds of a new "wonder" material that can be made into soft or rigid foam and in both solid and non-porous varieties.

Polyurethane, the new synthetic, has applications ranging from soft powder puffs to lightweight but rigid airplane parts, according to A. L. Freedlander, president. He reported that Dayton's subsidiary, American Latex Products Corp., Hawthorne, Calif., already is geared to produce two million pounds of polyurethane products.

Polyurethane foam can be made to any desired thickness and sliced less than wafer-thin. It can be nailed, tacked, sewn, ground and sawed. Sprayed as an insulant, it "grows" on to metal, glass and other materials with a permanent bond, Mr. Freedlander added.

Zabel Shows Junior Execs, Plant

Junior Executives Club of Philadelphia recently visited the plant of Zabel Brothers Co., Philadelphia lithographic firm. Members saw litho plate making and Zabel's new 2 color, 52" x 76" press.

Council Plans Industry Manual

"The Printing Industry" is the title of a new publication planned by the Education Council, Graphic Arts Industry, Inc., presenting a survey of all phases of the graphic arts industry. Victor Strauss, author of the book to be published in late 1956, said the manual is intended as a basic text for all individuals entering graphic arts and for those already in the field.

Victor Strauss is the author of

"Point-of Purchases Cardboard Displays" (obtainable from Modern Lithography).

Four sections of the book cover:

- (a) The Common Base
- (b) The Plant
- (c) The Market Place
- (d) The Meeting Ground.

The Common Base will discuss the importance of printing in the cultural and economic life; history of the graphic arts; scientific and artistic basis of printing; plates, papers and other stocks, inks and equipment.

The Plant will present data on typography, photoengraving, electrotyping, stereotyping, letterpress printing, offset lithography, gravure and silk screen. Also, flexography, finishing operations, collotype and xerography will be included.

The Market Place with encyclopaedia-style articles, will discuss annual reports, continuous forms, greeting cards and others, detailing the product's use, how purchased, processes of manufacture and other facts.

The Meeting Ground will be concerned with human relationships in the industry. It is intended as a guide to the graphic arts clubs and associations, research institutes, educational facilities and the trade press.

What you can do: The Council urges individuals concerned with graphic arts to express themselves as to what kind of information should go into this manual. Address questions and suggestions to:

Victor Strauss, P. O. Box 3, New York 24, N. Y.

Walter M. Sackett and Elmer G. Voigt, Education Council, Graphic Arts Industry, Inc., 719 fifteenth St., N.W., Wash 5, D. C.

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Philadelphia

Members Confer at Ives Color

At a special meeting Feb 24, at Ives Color Co., Philadelphia, problems of color photographic studios and lithographers were discussed by officers and board of governors members of the Philadelphia Litho Club. The "experimental" conference was held partially to determine feasibility of inviting the club's entire membership to the Ives Studios and laboratories.

Michael Pitcairn, president, Ives Color Co., and Jules Freedman, technical assistant, answered many questions relating to how direct color-corrected separation negatives can be used in the lithographic process. Correction at the source, Mr. Pitcairn said, can save a lot of trouble in plate making and the other processes necessary for a finished lithographic product.

Mr. Freedman said that separations made directly from a photographic subject are superior in quality to separations made from a transparency of the same subject. Interest was shown in results obtained from Ives' direct separation negatives that were carried completely through the halftone process in three colors, with no handwork and no black plate.

High-point in the color photography exhibition at Studios was an arrangement of progressives used in a color photograph of Bishop Fulton J. Sheen alongside progressives made through the lithographic process.

Mr. Freedman told the lithographers at the meeting that high fidelity of litho reproductions compared to the continuous-tone reproductions was possible because the litho plates were made directly from the direct color corrected separations taken in a one-shot color camera.

Mr. Pitcairn said that he was firmly convinced of the close relation between direct color-corrected separation photographic negatives and the lithographic process.

The Litho Club leaders also witnessed a demonstration showing production of dye transfers, conducted by Mrs. Jan Armstrong, of the company staff.

Litho Club leaders at the Ives meeting included: J. Leonard Starkey, Edward Stern & Co., Litho Club president; Howard T. Harcke and Howard R. Patton, Graphic Arts, Inc.; Andrew Given, National Decalcomania, treasurer of the club; Bernard Schochman, Philip Poplar, and John B. Fleming, Majestic Press; Stephen Rubenstein and Louis Ginsberg, Colorcraft Lithot Plate Co.; James L. Mahoney, Joseph Hoover & Sons Co.; J. H. Scherer, Brown & Bailey Co.; Robert Fournier, Edward Stern & Co.; James L. Starkey, Jr., Offset Plate Services; and Louis Brophy and Joseph E. Hickey, Lithographic Service Co.

Inspect 10-Color Press

Inspection of a unique "double five-color" offset press, that turns out lithography in 10 colors, was made March 28 by a large group of Philadelphia Litho Club members. They viewed the press, only one of its kind, at the Frederick H. Levey Co., 930 Washington Ave.

George Brody and Russell Himes, of Levey, together with three Danish representatives of the Aller Co., explained the press first at the dinner meeting in the Poor Richard Club. After this introduction the members adjourned to the Levey plant. Among the representatives was Klauss Aller, president of the Aller company, who explained that Aller bi-metal plates, of copper and stainless steel, are used on the press. (More details on the press in May ML).

Biggest attendance in the club's history turned out Feb. 28 for the annual quiz night, which this time featured an all-Philadelphia panel of experts on all phases of lithography. J. Leonard Starkey, Edward Stern & Co., announced that the record attendance totaled 181.

The panel, moderated by Stephen Rubenstein, Colorcraft Lithoplate Co., vice president of the club, included the following:

Camera—Harry Shaw, Lithographic Service; Plates—Joseph Mazzaferri, Colorcraft Lithoplate Co.; Press—Peter Ferrigno, Lithco, Inc., substituting for his brother Frank; Dot Etching—George E. Ruegg,

Dye Transfer Production

Dye transfers, made from direct color-corrected separation negatives, are explained to officers and members of the board of governors of the Litho Club of Philadelphia by Mrs. Jan Armstrong, Ives Color Co., Left to right are: Joseph E.

Hickey, Lithographic Service; Louis Ginsberg, of Colorcraft Litho Plate Co.; James J. Mahony, Joseph Hoover & Sons; Howard Patten, and Howard T. Harcke, Graphic



Arts, Inc.; Louis Brophy, Lithographic Service; and Andrew Given; National Decal-comania, treasurer at the Litho Club of Philadelphia.

Price Brothers, Bridgeton, N. J.; Paper—Harry J. Zeigler, S. D. Warren Co.; Ink—Adolph J. Pingarron, International Printing Ink Co.; Estimating — Randolph Lyons, Zabel Bros.; and Research—Walter Kaiser, Edward Stern & Co.

Questions were fired at the panel members for an hour and a half, covering a wide variety of subjects. Some of the typical queries, and the panel replies were these:

Q: What causes a fuzzy dot?

Shaw: Screen distance too great, poor developer.

Q: Can I use pre-sensitized plate as a proving plate if I am later going to run on deep-etch?

Mazzaferri: Yes, provided you allow for the differences in these two methods.

Q: Which do you prefer, a liquid or powder offset spray.

Ferrigno: Prefer liquid, paper frequently piles if too much powder is applied.

Q: What's the biggest problem in dot etching?

Ruegg: Human element is important, so are limitations of the film. Cameraman

can help artist by working with him on the exposure.

Q: How can I lick the tail-end hook problem?

Zeigler: Allow more paper at end.

Q: Most permanent pigments for chrome inks?

Ferrigno: Consult with ink supplier. Frequently he can help.

Pingarron: Chrome yellow is good. Phthalocyanine such as "Monastral," type is one of best general printing ink pigments.

Q: How close is your average estimate, when checked against actual cost sheets?

Lyons: Sometimes pennies away, occasionally far off. Important thing is to show a profit at year's end.

Q: Has advent of photo typesetting increased volume of offset printing?

Kaiser: Probably not. It is primarily a different way of arriving at a result we now get by other means. Economy is sought, not volume.

New members welcomed into the club by Mr. Starkey included Barnard Green, Majestic Lithographers; Joseph Schwartz, Wescott & Thomson; and Vernon Sprang, T. A. Winchell Co.

Twin City

Color TV Like Litho Process Work

Norman Mears, general manager of Buckbee Mears Co., St. Paul, Minn. told more than 58 members of the Club, that color TV work is quite similar to color process work in lithography. Comparison was made of white light to gravel, showing how the job of filtering for separation work is like sifting various grades of sand and gravel. A circular copper screen for color TV was shown (photo below). Mr. Mears

predicted that:

- (a) Full sets of color separations will be made in 30 minute.
- (b) Presensitized plates will replace whirled or hand coated plates.
- (c) And color separations will be made and checked on a scanner

Guests at the meeting included L. F. Nelson, Buckbee Mears; Bud Harley, W. G. Anderson Printing, Minneapolis; and Al Werner, Ramaley Printing, St. Paul. Two life members of the Club were present: Chester Scheidler, Chicago, and Ira Hoffman, Eastman Kodak Co.

Norman Mears (1.), general manager, Buckbee Mears Co., St. Paul, Minn., speaker.

Examining a color T.V. screen are (L. to r.) H. Crepeau, N. Albrecht and M. Keswin.





LTF Forum Set for April 29-30

Curtis Hotel, Minneapolis, is the meeting ground for Twin City's LTF Forum covering latest techniques in platemaking, handling of plates on the press, ink, paper, chemicals and other related topics. Starting promptly at 1 p.m., April 29, the forum is being co-sponsored by the following: A.L.A. No. 10, E. V. Donahue & R. H. Wybest, Twin City Litho Club, H. M. Werner and H. F. Smith; Printing Industry of Twin Cities, A. F. Heavers and H. N. Waldeland, and the calendar houses, H. C. Goebel and A. H. Lundgren.

St. Louis

Metallic Inks Talk Scheduled

Sleight-Hellmuth Ink Co., Chicago, will present a discussion on metallic inks and ink in general at the April 7 meeting of the St. Louis Litho Club, York Hotel.

Three new members added to the club's roster in March, all from Western Printing & Lithographing Co., St. Louis are: Dallas Mostrom, year book camera department; Jim Benjamin, press foreman, year book division; and Elmer Schmalholz, superintendent of the year book division.

Sixty-five persons attended the March meeting and heard Jim Willis, former St. Louisan and now with Consolidated Equipment Co., talk on new products in the equipment field.

Chicago

Press Nite at Chicago Club

Chicago Litho Club at its March 24 meeting heard Roy P. Tyler, installation and service manager, Harris-Seybold Co., discuss "Offset Press and Pressroom Problems." A panel discussion followed.

Plans for an intercity bowling meet with the Milwaukee Club, April 16 were announced by Jim Ludford, Chicago Litho Plate Graining Co., chairman of the entertainment committee. After ownership of the winner's cup has been decided on the alleys, a smoker and dinner will follow.

Speaker for the April meeting will be Bruce E. Tory, of Sidney, AusA FEW YEARS AGO THEY WERE CALLED "MIRACLE" INKS...
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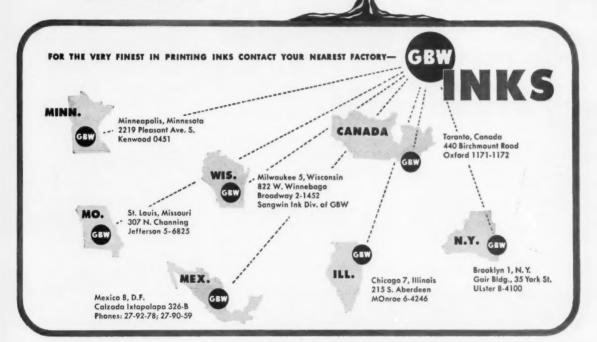
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tralia, who has been studying at the LTF research laboratory in Chicago as a Fulbright exchange scholar. Mr. Tory's talk, "Color Separation Masking Theory" will cover his work at Glessner House.

Conn. Valley

Ladies Night Draws 219

The S. R. O. sign was out March 19 at Lou Duncan's Restaurant, in Meriden, Conn. as an overflow crowd searched for space at dinner tables at Connecticut Valley Litho Club's annual ladies Nite dinner-dance. The program committee, Bob Ervin, chairman, had a well organized, fun-packed evening for members and their wives including 15 door prizes, entertainment by Al Avalon (seen recently on the Ed Sullivan TV show) and dancing 'til 1 a.m. Ladies had white carnation corsages given to them as they entered the dining room.

Door prizes including a rotisserie, cocktail blender, "Scotch Kooler," decorative apothecary jars, etc. were donated by suppliers.

City Printing Co., New Haven, had 52 members and wives present and arranged a reserved section of the dining room.

The regular meeting April 1, was past presidents night and Walter Dulak, immediate past president of the Club received a tie clasp with an offset press emblem on it, from members. William Mason, Forbes Lithographing and Manufacturing Co., Chelsea, Mass. spoke on camera techniques.

Cincinnati

Cincinnati, Dayton Litho Seminar

Three pullman cars on the New York Central's Ohio State Limited have been reserved for club members attending a one-day seminar, April 15, at Eastman Kodak Co., Rochester, N. Y. Planned by the educational committees of Cincinnati and Dayton Litho Clubs, members of both clubs are invited to attend; departure is on April 14, return April 16.

New members introduced at the "gripe night" meeting, March 8, were Donald E. Blumhorst, Bell and Hortenstine Co., and Fred Phister, A. H. Pugh Printing Co.

A closed dinner meeting is scheduled for April 12 and the club's annual moonlight boatride on the Ohio River, June 4, has been planned.

Baltimore

Annual Industry Night

Edwin W. Parker, vice president, Parker Metal Decorating Co., was guest speaker at Baltimore Litho Club's annual industry night dinner meeting, March 21.

Mr. Parker, who is a past president of the club, reviewed the history of the Parker Co. and showed samples of their metal decorating work. April 19 the club will tour the Parker plant after a dinner at Francis Scott Key Restaurant.

Baltimore Sun Firemen's Fund, received \$112 from the Litho Club's Oyster Roast held Feb. 19.



Taking a breather between dinner and the dance are Frank Holloway, Bob Ervin, Mrs. M. Pagliaro, and Mike Pagliaro, president of Holyoke Lithograph Co.

Viewing the Connecticut Valley Litho Club's Ladies Nite revelry from the head table are (l. to r.): Andy Pagliaro, treas.; Mrs. Pagliaro; Herb Bauer, vice president; Mrs. Bauer.

City Printing Co. executives at the party are (l. to r.): David Gandelman, president; Tony Di Nicola, manager, offset department; Mrs. Walter Lynch.

LITHO CLUB GUIDE

BALTIMORE

Norwood A. Heselbach, Secy. Interchemical Corp. 720 East Pratt St., Baltimore 2, Md.

BOSTON

Thomas J. Cain, Secy. Hub Offset Co. 175 Purchase St., Boston 10

BUFFALO
Vic Reisch, Secy.
33 Eiseman Ave., Kenmore 17, N. Y.

CANTON, Ohio Jack R. Reinart, Secy. 1012 Maryland Ave., S.W., Canton

CHICAGO Fred L. Faulkner, Secy. Chief Printing Co.

CINCINNATI
Ralph Eckard, Secy.
Nielsen Litho. Co.
4142 Airport Rd.
Cincinnati 26, Ohio

CLEVELAND Milton Cornman, Secy. IPI 1325 W. 73 St., Cleveland 2

CONNECTICUT VALLEY
Charles H. Waterhouse, Secy.
27 Van Ness St., Springfield, Mass.

DALLAS
L. J. Reynolds
6306 Latta St., Dallas, Texas

DAYTON Richard Clark, Secy. 740 Vine St., Piqua, 0.

DETROIT
John Murphy, Secy.
13110 Santa Rosa, Detroit

HOUSTON
D. Burton Pitts, Secy.
61 Riesner, Houston, Texas

MILWAUKEE
Allan N. Williams, Secy.
4463 N. Morris Blvd., Milwaukee 11, Wis.

NEW YORK Tom Cavallero Schiegel Litho. Corp. 2nd Ave. & 22nd St., New York Meets 4th Wednesday, Building Trades Club

ONTARIO Harold E. Swift, Secy. 179 Bartley Drive, Toronto 16, Ontario, Canada

PHILADELPHIA
Joseph Winterburg, Secy.
622 Race Street, Philadelphia 6
Meets 4th Monday, Poor Richard Club

QUEBEC John Martin, Secy. Gazette Printing Co., Ltd. 1000 St. Antoine St., Montreal, Canada

ROCHESTER
Roy Bippes, Secy.
Box 401, 87 Pleasant Ave., Pt. Pleasant, N. Y.

ST. LOUIS
Walter Blattenberger, Secy.
1310 South Spring St., St. Louis 10, Mo.

TWIN CITY
Paul Rudin, Secy.
Brown & Bigelow
Quality Park, St. Paul 4

WASHINGTON
H. Thos. Driver, Secy.
PO Box 952, Benj. Franklin Sta.
Washington, D. C.
Meets 4th Tuesday

NAT'L ASS'N OF LITHO CLUBS Frank Mortimer, Exec. Secy. Govt. Printing Office, Washington, D. C.

Washington

Capitol Ink Host to Club

Members were treated to buffet dinner at the plant of Capitol Printing Ink Co., Washington, March 22, and toured the laboratories and production sections of the company. Science of selecting the basic ingredients was discussed and members saw actual grinding of litho and printing inks.



Washington Litho Club's Oyster Roast turnouts included Dave Fell, vice president, Washington Litho Club; Jack Blades, president, NALC; Bud Krebs, president, Washington Litho Club; and Frank Mortimer, executive secretary, NALC.

Canton

Cleveland President Speaker

Canton Litho Club members heard Paul E. Meunier, president, Cleveland Litho Club, speak on "Army Lithography" at their meeting, March 9. Mr. Meunier, captain in the Topographic Unit of the Corps of Engineers, Reserves, exhibited samples of aerial film, maps, charts, etc. lithographed for the unit.

Cleveland

Double Feature Movies Seen

Two films, one by Cleveland Illuminating Co. on the St. Lawrence Seaway, and the second, "Safety on Presses" were viewed by 85 members and guests at the club meeting, March 24. Advantages of the seaway for Cleveland are thought to be many, lending more credence to Cleveland's slogan "The best location in the nation."

New members inducted into the club are: Orvile E. Wells, production manager, Horn-Ohio Co.; Stanley W. Page, pressman, Merrick Lithograph Co.; Hale Hamilton, sales, Miehle Printing Machinery Co.; and Walter R. Evenson, sales; Minnesota Mining & Manufacturing Co.

New York

Past Presidents Lauded

After steak dinner "with the trimmings", at the March 23 meeting of the club, Don Rovegno, president, gave the following past presidents, who sat at the head table, scrolls in appreciation of their past work for the club:

R. M. Schmid, Harvey Glover, George Walsh, Richard Brendel, Al Rossotti, William Carey, John Mcguire, Jack Tisne and Angelo Pustorino. Members stood in a moment of silent respect for Jack Valiant and John Hogan, past presidents who have died.

Al Rossotti asked the members to remember that it was the New York Litho Club that motivated and promoted the formation of the National Association of Litho Clubs.

Ladies Nite, May 14, will be held at the Biltmore Hotel, said Dan Ford, vice president.

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Joseph Santoro, Republic Container Corp., is shown inspecting the Baldwin ink fountain agitator on their new Hooper Two-Color printer slotter.

New Use for Baldwin Agitator

Adaptation of the Baldwin ink fountain agitator for use in box and fiber board printing was recently announced by William Gegenheimer Co., Brooklyn.

Republic Container Corp., Jersey City, were among the first to test it for this application on a printer slotter. Installed on a new Hooper 2-color press, the problem of keeping inks evenly mixed and distributed to the rollers was reduced; better printing quality with less ink, particularly on solid colors was noted; and manual fountain attention time was cut, the company stated.

The unit has a patented rotating cone with adjustable travel that sweeps any desired length of the fountain to maintain uniform distribution. Joseph Santoro, Republic Container Corp. is shown inspecting the Baldwin ink fountain agitator on their new Hooper Two-Color printer slotter.

Doyle Sheet Cleaner Data

Installation details with cut-away drawings and photographs are given in three data sheets distributed by J. E. Doyle Co., Cleveland, on their vacuum sheet cleaner. Advantages for the cleaner are said to be: insures better presswork and cleaner impressions by collecting dirt off paper and keeping dirt off form or plate; saves frequent press stops to wash off form or plate; saves ink by keeping ink in fountain free from dirt from paper stock; saves roller wear by keeping dirt from paper stock off rollers, form or plate.

Filtering or dust collecting bags are made of Orlon.

nuArc Offers New Accessories

Shops handling Davidson and multilith equipment will find nu-Arc's Light Table with the developing table top a useful tool in their work, according to the company.

Suited for opaquing, stripping, layout, checking and finishing of plates, the Light Table is available in two sizes: a floor model (LT-23) measuring 25" x 30" plus a 23" x 23" extension table at right side; and a portable model (LT-18) measuring 18" x 20".

Other new equipment introduced is the Rapid Printer, smallest genuine carbon arc lamp on the market, it is said. The enclosed carbon arc lamp and vacuum printing frame includes a blower system to dispel fumes and filter objectionable odors. Plates up to 12" x 16" can be handled.

Four new darkroom lights have also been added to nu-Arc's line of products. Standard models are 25" x 30" x 12" and 22" x 19" x 8". Special models, similar in size but con-



structed with a glass front slanting forward from the bottom five inches and equipped with a trough to hold glass and drain etching fluids are also available.

New Safety Control

Harris-Seybold Co. report a new safety control for electrical machinery, which is creating interest in the National Safety Council and Engineering and Research Council, Graphic Arts Industry, Especially designed for printing equipment, the new device may have application to other types of machinery that must be intermittently started and stopped.

A joint effort by the Harris-Seybold Co. and Cutler-Hammer, Inc., the new control requires the operator to push two buttons simultaenously with two fingers of the same hand, in order to begin continuous operation of the machine. When either of the buttons is pushed singly, machine will operate only as long as button is depressed. Operators may therefore "inch" or rapidly start and stop equipment when making adjustments, without danger of it starting and continuing to run.

Harris-Seybold has filed a patent application, but will dedicate the invention to the public, so that it may be manufactured or used without payment of royalty.

New Styrene Sheet Out

A rubber-modified styrene sheet said to have improved impact strength. fine texture, and freedom from strains is now being offered in a range of thicknesses and colors by Campco division, Chicago Molded Products Corp.

Because of closely controlled extrusion process reducing internal strains to a minimum, this sheet called Campco S-540, is especially suitable for printed jobs, where close register is required, according to the manufacturer. Thinner gauge sheets are supplied in widths up to 26 inches.

In heavier gauges, Campco S-540 is available in thicknesses from .040" to .187". The heavy gauge material is supplied in mat finish, polished finish, or in a high-gloss (GM) finish.

Hand Cream for Lithographers

A protective hand lotion, "Glovex," which guards the skin against printers' and lithographers' inks, stains, oils, waxes, oil soluble dyes, grease, grime, mastics, paints, etc., is announced by Glovex Corp., Pittsburgh, Pa. Field tests in the press room of two major Pittsburgh newspapers substantiate the value of the product, the manufacturer says.

The product is applied by smoothing over hands, cuticles, under nails and permitted to dry. Washing with soap and water dissolves the lotion, and ink stains rinse away.

It has been tested and approved by the Pittsburgh Testing Laboratory.



Tape Dispenser Attachment

A new snap-on attachment permitting easier handling of doublecoated pressure-sensitive tape on standard "Scotch" brand deluxe



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Detroit Plant

825 West Elizbaeth St. Detroit 1, Mich.

New York Office 122 East 42nd St., Room 419 New York 17, New York

Chicago Office 222 West Adams St., Room 429 Chicago 6, III. heavy duty dispensers was announced recently by Minnesota Mining and Manufacturing Co., St. Paul, Minn.

The new conversion unit, model M-75, consists of two steel guides and a liner rewind arm that snap quickly into place. Liner material from 1,296inch rolls of either the "Scotch" brand double-coated paper or cellophane tape in widths from 1/4- to oneinch, can be handled.

Five New ATF Pamphlets

Released last month by American Type Founders, Inc., new literature on photomechanical equipment and installation of offset facilities details, with illustrations, the following:

(a) Mastercraft camera: 8-page booklet gives features of 17" gallery type camera including illumination integrator.

(b) Mastercraft platemaker: combination printing frame, rub-up table and stripping table is discussed plus an outline floor plan.

(c) Mastercraft developing unit: installation and specifications of the three tray, constant temperature darkroom sink are given.

(d) Kwikplate printing frame: operating features and step-by-step account of its use are included.

(e) Stepping Up Profitably in Offset: simplified plan for installing an offset department capable of processing plates and running them is presented. ATF Chief offset presses are also described.

New Mechanical Collator

Carl H. Heigl, head of Graphic Arts Development Co., Cleveland, announced a new mechanical collator last month.

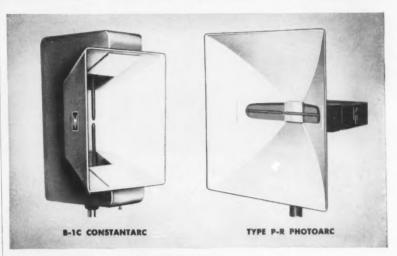
Basic unit consists of the main drive, paper pickup station, and tape delivery. Feeder units, which can be added as needed, provide two paper pickup stations per unit. Accuracy of the machine's pickup and delivery centers around a precision measuring device having sensitivity capable of detecting whether a pickup feeder has erred by a margin of one sheet plus or minus. A red indicator signal, energized by the measuring device, lights up to identify the station in need of attention.

New Potdevin Literature

Potdevin Machine Co., Teterboro, N. J., has published a new descriptive circular on its Repro-Proof coating machine. The machine is shown applying a pressure-sensitive wax coating to paper or transparent acetate reproduction proofs. Coating does not affect the transparency of the acetate, and allows the proof to be secured in position in the makeup by pressure with the fingers or other smooth, flat object. Position of the proof is easily changed, simply by lifting off and pressing down in a different place, the bulletin states.

New Offset Plate

Charles F. Clerkin Co., New Haven, Conn., manufacturers of offset plate-making chemicals, has announced the development and production of a new pre-sensitized offset plate, a product of the new plate division of the company, with a plant located in Lexington, Mass.



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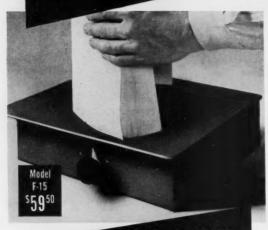




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Think of it! A full size paper jogger, Model F-15, 12 x 15 with automatic action, static eliminator and a one year guarantee for only \$59.50. Or, you can get the Model F-20 (Deck Size 15 x 20) for only \$79.50. Automatically turns on when paper touches deck — shuts off when paper is removed. Built to last for years, the Papertron will quickly pay for itself in time saved in your press room and bindery. Easily handles 11 x 17 and larger sheets and over 30 lbs. of paper. Patented static eliminator prevents doubles. Jogging intensity is easily controlled. Save time . . . and it will add up to greater profits. Order your Papertron today!

> To order, or for more information, consult your dealer or mail coupon below.



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Sirs: Please send me the following. I understand each Papertron has a 1 year guarantee. DESCRIPTION PRICE

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No chemicals, gums, lacquer, etches or inks are required to prepare the C F C Pre-sensitized plate for use, it is said, and the aluminum plate will stand up under long runs.

New Clamp Handles Paper Rolls

A new rotating clamp for roll paper has been developed for use on its industrial trucks by The Elwell-Parker Electric Co., Cleveland. The clamp provides extra large capacity, a stroke capable of handling rolls of paper with diameters ranging from 12 to 51 inches, and the ability to pick up loads in either a horizontal or vertical position and rotate them as required.

The new attachment fills the need for a clamp that can handle both full size and butt rolls, the company said.

New Book Cover Lacquer

Pyroxylin Products, Inc., Chicago, has developed a special lacquer for the protection of offset and gravure printed book cover cloths. Offering protection against staining, abrasion and wear, the new Pyroxcote lacquer is applied to imprinted cover cloth on sheet varnishing machines, by gravure, or by spraying or roller-coating the book after casing.

Leaflet on Glue Tipper

The Tipmaster all-electric glue tipper with Guidemaster guide system is described in a two-color four-page brochure recently issued by Pierce Specialized Equipment Co., San Mateo, Calif.

Tipmaster's one-unit glue fountain and tipper has been improved through incorporation of combination reversible tipping and blanking pins, the company said. Traymaster collating trays employing a new principle of paper separation for hand gathering are described.

Varigraph Letterer Shown in N. Y.

Graphic Arts Suppliers, Brooklyn, introduced its new Super Varigraph lettering instrument, April 4-6, in New York.

The new instrument, according to the company, cuts finished lettering directly on silk-screen film, frisket

New

Skid-Handling

System

The Epco double trackage system for moving skids and pallets has been announced by Engineering Products Co., Chicago. An adaptation of the original single Epco trackage system used in paper mills and corrugated box plants, for years.

to handle heavy paper rolls, the Eoco trackage itself consisting of a series of rollers having sealed ball bearings does the work. Paper roll is carried on a special flat bottomed dolly which alides over the track

paper, or patterned acetate sheets; letters directly on acetate sheets for use as photographic positives or negatives; simplifies filled in lettering in black and white or full color for a variety of effects such as reversed, shaded, curved or perspective lettering, by means of a new pen attachment; produces thousands of sizes and shapes from ½ inch to two inches from one master alphabet.

Dry Offset Press Marketed

Developed by Vandercook & Sons, Inc., a new dry offset press designed for production of printed circuits, nameplates and dials is now in pro-

rollers when pushed by one man.
Trackage is placed flush in the floor, with tops of the rollers just above heavy steel safety treads. Foot and truck traffic can cross at any point.

duction at the Chicago plant.

The press, designated Vandercook 15-20, will print from positive letterpress plates or forms on paper, metal, plastics and practically any other flat material up to one inch thickness, the company said. Maximum speed is 400 cycles, per hour.

New Projector By Engel

A calibrated scaling system allowing rapid adjustment to positions ranging from four-time enlargement to four-time reduction is one design improvement in Model 44 Art-O-Graph vertical projector just announced by J. A. Engel, Inc., Mpls.

Miller Sells Poly-Automat

The 14½" x 20½" M.A.N. Poly-Automat is now being sold and serviced in the U.S. and Canada by Miller Printing Machinery Co., Pittsburgh, and Toronto. This machine is manufactured by Maschinenfabrik Augsburg-Nurnberg A.G.,

Augsburg, Germany, and is similar to the several hundred M.A.N. Poly Presses now in operation in this country.

An expanded Miller service organization will be available to install and repair the M.A.N. Poly-Automat. Two Miller men have returned from Germany and two M.A.N. mechanics are in America to assist with the erection of the first fifty presses and to conduct a school for the Miller servicemen. Stock from .002" to .028" in thickness and



a sheet 5%" x 5%" to 14½" x 20½" can be handled, at a speed of 1400 to 5000 sheets per hour. Double-acting pyramid inking system is said to provide an ink supply that surpasses what is usually expected of presses of this size. All form rollers clear the form at each stroke and reverse five inches beyond the bed. An automatic double-roll device provides an extra supply of ink for work requiring extra heavy coverage.

THIS IS THE "BUSINESS END" OF A BRUSH

N SERIES 7 FINEST SABLE HAIR

Winsor & Newton's

Series

"ALBATA"

Vorld's Finest Brush fo

World's Finest Brush for Lithographing and Retouching

It's always good business to use the Finest...Winsor & Newton's "Series 7"

Pure Red Sable Brushes give you high litho strength and the fine point needed for retouching. They assure you extreme durability, even when used with the coarse, powdery pigments applied in opaquing, deep-etch staging and touching. Available in sizes 000 through 14.



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We now manufacture efficient cleaners for the following makes of presses — Harris Offset and Rotary, Miehle Offset and Rotary, Hoe Tin Decorating, Ebco and Webendorfer.

Leading lithographers, and metal decorating establishments have made our cleaners standard equipment in their pressrooms.

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CLEVELAND 14. OHIO

New Fountain Divider

Bar-Plate Manufacturing Co., Orange, Conn., manufacturers of Page fountain dividers has announced a fountain divider for the Davidson 14 x 17 Press Model No. 233. The company said this was its first step in developing a complete line of fountain dividers for Multilith, Davidson, Miehle, ATF, and Harris small offset presses.

U. S. Litho Buys Calif. Land

Purchase of 11 acres of industrial land adjacent to Western Pacific Railroad tracks in San Jose, Calif., by U. S. Printing & Lithographing Corp., Cincinnati, was revealed last month by Alfred H. Wilhelm, secretary. Although Mr. Wilhelm said that the firm has no definite plans for building now, Lloyd S. Weber, San Jose Chamber of Commerce, affirmed that the company has made an exhaustive study in Santa Clara county with a plant location site in mind.

Western Pacific Railroad sold the land to U. S. Litho at an undisclosed figure, saying that a plant built on the site would be virtually free from smoke and other nuisances.

Dacron, Nylon, Orlon Make Paper

Paper, three to ten times stronger than that made from conventional pulp or rags has been produced from nylon fiber, "Dacron" polyester fiber, and "Orlon" acrylic fiber. Du Pont Co. announced the development at the annual meeting of Technical Association of the Pulp and Paper Industry, Feb. 21-24, New York. Du Pont will not manufacture the papers but is making details of the work available to the paper industry.

Robert A. A. Hentschel, Pioneering Research division, Textile Fibers department, said the unusual properties of synthetic fibers are carried over into the papers made from them.

"They are highly resistant to chemical attack, absorb very little moisture, and resist the action of molds, bacteria, and light. The high strength of the synthetic fiber papers suggests use in heavy duty bags, for instance, and their resistance to chemical attack would be useful in filtration of

corrosive liquids and packaging chemicals. Stability of the papers to moisture indicates use in map and tracing papers and for important records and documents where permanence is necessary," Dr. Hentschel said.

Resistance of these papers to folding was up to 200 times that of papers made from wood pulp or rags, it was said.

The cost of paper from synthetic fibers is higher than wood pulp paper, but it is expected these costs can be decreased as use of the paper grows.

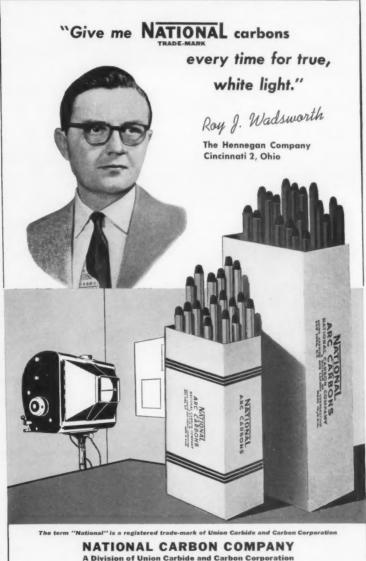
S & V Appoints Pfister

Sinclair & Valentine
Co. has announced
the appointment of
Lewis M. Pfister to
the Packaging division, with headquarters in New
York.

More recently assistant to the vice presi-



dent and production manager, St. Regis Paper Co., he has also been assistant director of packaging product development Union Bag and Paper Co. Mr. Pfister will be directly concerned with coordinating the efforts of the firm's Packaging Division with consumer bag and package inks throughout the industry.



Division of Union Carbide and Carbon Corporation 30 East 42nd Street, New York 17, N. Y.

Sales Offices: Atlanta, Chicago, Dallas, Kansas City, Los Angeles, New York, Pittsburgh, San Francisco In Canada: Union Carbide Canada Limited, Toronto

Third Entry for 'Biggest Camera'

In December ML (p. 101) it was Robertson Photomechanix Inc., Chicago saying new Robertson 48' Tri-Color model believed to be the most massive, rigid and heaviest of any camera ever built.

In February ML (p. 98) Lanston Monotype Corp., featuring its M-H precision overhead phototemplate camera said not that we like to brag, but we believe this M-H camera is probably the world's largest and most precise.

Now comes Rutherford Machinery Co., division of Sun Chemical Corp., Long Island City, with: "Is this a private contest or can anyone get into it? None of the other entries have stated the size of the largest re-



ductions and enlargements that can be made, so here's something to dwell upon. capable of 20 times reduction and enlarge ment, up to 96 x 144"! Focusing to 1/1000 of an inch is done as easily as dialing a

Says Rutherford, "Can you top this?" (Ed note: ML is only holding the coats in this match.)

'In 1950 we produced a template camera measuring 46 feet long, (as shown above)

telephone.

Schlegel Wins Safety Award

For a record of only one lost-time accident in nearly 264,000 man hours of operation, Schlegel Lithographing Corp., New York, won special recogntion from Employers Mutuals of Wausau, Wis. An engraved plaque was presented to Jacques J. Tisne, vice-president and treasurer and

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Photos, Negatives,

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Paper.

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RETOUCHING

OPAQUING MARKING

plant manager, by H. W. Raimert, New York safety engineer for Employers Mutuals.

Also cited for their efforts in the program were W. Kruse, assistant plant manager; J. Dubin, safety supervisor; Foremen A. Ray, M. Calderaro, A. Simonds, T. Beihofer, L. Trabucchi, and Miss J. Calderaro.

Harris "Kills" Four Presses

Classified as "dead" under Harris-Sevbold Co.'s standard obsolescence program, are four offset presses, according to Ren R. Perry, vice president of sales. This program affects manufacturing and supplying of parts for older machines that have not been produced for many years.

Two of the presses are Harris Model LB, a 41x54" single-color offset, and Model GT, a 41x54" twocolor. The LB was designed in 1923 and the GT in 1925. Both presses have been obsoleted twice by newer Harris models. Other models declared obsolete are the 41x54" HT and JT, three-color and four-color models, respectively. Only one HT was built, and six JT's, both designed in the early 1930's.

Effective date of the action declaring all four models "dead" was March 31; however, patterns, fixtures and available parts will be on hand for six months. Individual blueprints for making parts locally will be supplied on request after the expiration of this period.

GRAPHIC Amazing New PEN Does 6 "SPEED-O-GRAPH" 3 SIZES non-clogging Graphic Arts FINE . MEDIUM . BROAD FOUNTAIN PEN Only \$295 POSTPAID SATISFACTION GUARANTEED or your money refunded! Saves Valuable Time THE ONLY on all these operations: **AUTOMATIC PEN**

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Offset or Letterpress?

Miehle Printing Press & Manufacturing Co. has recently printed two unusual six-page direct mail pieces. A full press sheet consisting of two six-page folders, plus two four-page folders was printed one side on Miehle's 46 two-color and 56 single-color letterpresses, four process colors and one decorative color. The sheet was then cut in two; the two four-page folders were backed up on a Miehle 29 letterpress and the two six-page folders were backed up on a Miehle 29 offset. Both back-ups were in five colors.

An identical color subject was printed on pages one and five of one of the pieces to illustrate equal quality by either process, and different color subjects on the other to show that certain subjects are more adaptable to letterpress and others to offset.

St. Louis Bank Boosts Litho

With the theme "St. Louis, a great place to do business," the First National Bank in St. Louis featured offset-lithography in their quarter page newspaper advertisement (Wall Street Journal, March 16). Showing a modern offset press in action, the ad read:

"... as a center for offset-lithography, St. Louis ranks third nationally"... "fifth largest commercial printing center in the nation"... "overall output of more than \$45 annually."

Cost Panel at MLA Meeting

Members of the Metropolitan Lithographers Association were briefed on current cost problems March 15th at a dinner meeting, Hotel Shelburne, N. Y. Morris Goldman, J. K. Lasser Co., accountants specializing in the graphic arts industries, suggested a ratio cost survey of lithographic costs in the New York area, pointing out that the more uniform conditions of shops in a local area gives a more accurate picture.

The cost panel included:

Saul L. Blackman, Brett Litho; Herbert E. Brod, Lutz & Sheinkman; Ames Hilperts, Kindred MacLean Co.; Jacques Tisne, Schlegel Litho; and Morris Goldman, J. K. Lasser Co.

Proper handling of the N. Y. Sales tax on outside purchases, frequence of checking hourly cost rates, procedure for incorporating changes in estimates, handling of reserve for vacation payroll under the recent Treasury Dept. decision, and the advantages and disadvantages of the new accelerated depreciation charge-off methods on new equipment and buildings, all were discussed.

Weyand to 3M Sales Chief

Louis F. Weyand, executive vice president and director of Minnesota Mining & Manufacturing Co., has been named to the top sales job, the company announced last month.

As sales director for 3M, Mr. Weyand succeeds George H. Halpin, also an executive vice president and board member, who will remain active as a consultant. Mr. Halpin, who reached retirement age last November, had asked to be relieved of the responsibilities of director of sales.



WHAT A BREAK . . . for '55

DON'T BE AFRAID OF PROSPERITY . . . IT'S

HERE FOR A LONG TIME TO COME

.. TAKE ADVANTAGE OF IT! Grab the "Breaks"!

Actually your investment NOW 25% LESS

Thanks to the thousands of orders you've given us since V-E Day our costs of building also merchandising costs were cut to the bone and we have, over the years, only taken a profit mark-up of 2% or less and the Many Purpose . . . Many-Profit "Goldmine" BAUM-FOLDERS are priced so low, so very low.

And now they cost even less, actually. Why? Because the new ACCELERATED DEPRECIATION LAW, now in effect, means that you can write off over 50% the first five years . . . the saving in taxes on your corporations' profit the first five years cuts your investment down 25%.

The 17½ x 22½ five-fold "Junior Jet" automatic Folder, cutter . . . scorer . . . perforator, with Friction Feed . . . only \$100 initial and \$48 a month out of your increased profit for

30 months. The 22 x 28 and the 25 x 38 and the 30 x 46, likewise low-priced, on pay-for-itself terms over 30 months . . . just a small share monthly of your increased earnings, no finance charge — just simple interest.

OUT with the OLD . . . in with the NEW. All old model folders are POISON to your profits . . . SCRAP them and START making the MAXIMUM money NOW. . . . THIS YEAR CAN BE YOUR MOST PROFITABLE YEAR . . . if you'll grab the "breaks". It's costing you heaven knows how much to be handicapped with obsolescent folders . . . why not telephone me (collect) LOmbard 3-8164 and talk it over.

Thank you again and again.

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P.S. — The MAXIMUM IN VERSATILITY. And all the speed paper can take . . . therefore, you'll have the FASTEST (therefore, most profitable) folder years from now.

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All sizes ZINC and
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Ferguson to Keynote TAPPI Conf.

Gerald Haywood, director of research, West Virginia Pulp & Paper Co. will give the keynote address at TAPPI's sixth coating conference, May 23-25, Hotel Statler, Cleveland. J. W. Swanson, Institute of Paper Chemistry, will be moderator of a panel discussion on pignents; George Ferguson, president, Watervliet Paper Co., will speak on "Coating Frontiers" at the annual luncheon; a paper by Robert Reif, Battelle Memorial Institute will discuss a new coating process.

LTF MEETING

(Continued from Page 48)

Fiber Co., Hamilton, O., and Ren Perry, Harris-Seybold Co., Cleveland. They were chosen to fill the unexpired terms of Hugo H. Hanson and H. A. Porter, who resigned.

The following officers continue for 1955: J. L. Landenberger, president; John F. Perrin, vice president; W. F. Cornell, treasurer; and B. S. Rosenstadt, secretary.

Members of the executive committee, elected for the year are: Z. Wayne Adams, W. F. Cornell, W. M. Garrigus, John F. Perrin, Carl N. Reed and Elmer Voigt. The finance committee for 1955 includes Messrs. Cornell. Reed and Rosenstadt.★

COLOR CORRECTION

(Continued from Page 78)

that we observe in the copy. We don't propose, as in a Neugebauer equation, to synthesize, theoretically, let's say, what actually occurs when you print a certain size dot in conjunction with the various process colors. In other words, what we are trying to do is to say, "Here is a given color. What must we use on the printing press to match this color?" We don't propose to algebraically spell out the various types of distortion. We obtain what we have, without question. We accept the distortion that one gets as a result of plate making, as a result of trapping, paper diffusion of light, tone reproduction failure, etc. All these combine to give one a finished press proof. This is what we see. In this process we empirically establish the relationship between what we obtain on a printing press and the color of the initial copy that we are trying to reproduce.

Mr. Rydz: In other words, you are saying that you are matching the tri-

stimulus values of the reproduction with the tristimulus values of the original.

Mr. Tobias: Well, basically we are. Otherwise, they wouldn't appear alike, would they? However, this does not imply the use of the Neugebauer equations.

Chairman Yule: Are there any more questions?

Q: I would like to ask you again the question which I brought up this morning, which I think would be of interest. Suppose you have a black line on a deep violet background and your printing is a little out of register?

Mr. Tobias: There are two possibilities there. We can employ a technique that the television engineers are using now in colored television; that is to say that the chromaticity characteristics of the picture need have less resolution than the luminance characteristics of the picture. The reason for that is, apparently the eye is unable to see fine detail that exists as a result of hue or saturation differences, but it sees detail resulting from differences in luminance. Now, the result of that would be that you could have, the maximum resolution assigned to the black printer and we would use somewhat lower resolution for the colored inks themselves. The result would be something similar to unsharp masking, where you would get enough overlap to account for differences due to misregister.

Another possibility is, of course, to use electronic gating circuits, which will automatically introduce a minimum size for the three channels if the luminance drops below some value. That would prevent white paper from showing, for instance, under a black line.*



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Make your 24" camera do the job of a 32" with a set of BM angle screens.

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Keep complete selection on hand at all times. Don't waste valuable camera time making tints. 60 to 133 line in 6 tone values.

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NUMBER 10

- ELIMINATE PICKING and sticking on coated and card stock
- PREVENT OFFSET
- OVERCOME Tackiness in inks or blankets
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- FREE FLOWING consistency in the ink for more even coverage on solids



Not to be confused with wax compounds, varnishes or driers. "EEZY-LITH #10" will not change the shade of the ink or harm the rollers, plate or blanket.

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OMPLETE OFFSET PLATE SERVICE-

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PHOTO CLINIC

(Continued from Page 54)

has never been fully exploited. But, as a means for improving conventional halftones, the special stops are not advisable. This writer has found that much more can be gained by improving the standards of conventional operations in respect to exposure control, diaphragm control, temperature control and processing technique.*

STANDARDS

(Continued from Page 51)

up the membership of this Council:
First, we have printer members.
Large plants are represented and small plants are represented. Remember, the results of efforts of this Council benefit large and small printers alike; there is no differen-

Secondly, we have members who represent our allied industries, such as the ink and paper manufacturers, press and bindery equipment manufacturers, engravers, and electrotypers. Committees concerned with problems of printing that tie in with some of the raw materials we use include as active members the representatives of manufacturers of such materials. Thus, we are working together with our suppliers—or, rather, our suppliers are working with us to solve some of the problems where raw materials play an important part.

Other Industries

Thirdly, represented in this Council are other industries not allied to printing as such, but whose research facilities in this age of rapid technological advancement can be put to work for the printing industry. Their contributions, of course, can also benefit them in the long run. Such industries represented in our membership include RCA, Dow Chemical, Minnesota Mining and Manufacturing Company, Union Carbide, Corning Glass Works, Dupont, and National Adhesive Manufacturers.

In concluding, there are two thoughts that I must express: First, I know that this Council can help to give great impetus to the progress of our industry. Secondly, it is amazing that so many members of the industry are so slow in taking advantage of the opportunity that is being offered them. The graphic arts research movement needs the support of every printing plant in the country. And, in this day of rapid and competitive industrial development, every printing plant in the country needs the improvements that research can accomplish for it. The quicker the movement gets support, the quicker the printer gets profitable results. We have so much catching up to do we can't afford to dawdle.*

BOX AWARDS

(Continued from Page 55)

tion's competition this year to select "America's 100 Best Folding Cartons" brought out a record total of 6,782 entries, which was an eight percent increase over the 1954 contest.

This "annual showcase of American packaging" was exhibited and winners announced during the Drake Hotel convention. Award winners in past years have been exhibited throughout the U. S. and Canada and in many European capitals. Trade publications throughout the globe also have given the contest unusual attention. This year's story of the contest with pictures of winners will be carried worldwide in a color motion picture.

Judging Method

Judges scored the boxes on attractiveness, protection, sales power and economy, and on five general checking points. There were four major classifications, further broken down into a total of 22 subdivisions.

In the "Technical Superiority of Printing" classification, judges were Howard King, York, Pa., a leader in the International Association of Printing House Craftsmen, George Meyers of Time, Inc., Chicago, and Burton Cherry, Chicago typographic consultant and designer.*





models that handle plates from 12 x 16" up to 17½ x 22½". Genuine carbon arc-vacuum printing frame system assures large plant quality and production economies. Your choice of 3 popular models.

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RP-17 Floor Model—Plate Size 14 x 20"
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of water.

EXTRA... Hanco Plate Etch also makes a gumming up solution of the finest quality.

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We want you to see for yourself just how many EXTRAS Hanco Plate Etch will give you. Send for a generous FREE SAMPLE today. Try it at our invitation.

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many Extras it gives.

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Concordia Publishing Expands

Concordia Publishing House, St. Louis, Mo., official publisher for The Lutheran Church, Missouri Synod, is adding 27,000 square feet floor area to its offices. Also, a 310 ton air conditioning compressor center providing humidification control of the offset printing area is being installed.

POSTER AWARDS

(Continued from Page 49)

reproductions of the prize winners, the "100 Best" and others having merit in copy, art and design.

The competition, held annually, has a three-fold purpose: 1. to stimulate interest in and effective use of outdoor advertising; 2. provide an incentive for creators of new ideas and techniques in outdoor posters; and 3. to recognize and reward advertising agencies, art directors, artists, lithographers, screen process printers and billboard operators for excellence in producing designs of distinction.

Chairman of the exhibit committee was George F. Baier, vice president and art director, J. Walter Thompson Co., Chicago. Other members of the committee were James G. Sherman, McCann-Erickson, Inc., and president of the Art Directors Club of Chicago; B. L. Robbins, president, General Outdoor Advertising Co., and Orville Sheldon, Foote, Cone & Belding. Incidentally, advance promotional material for the affair was lithographed by the Veritone Co., Chicago.★

OFFSET PAPER

(Continued from Page 44)

it is neither giving nor taking on moisture under those conditions, we need roughly $6\frac{1}{4}$ percent moisture content in the paper. In other words, every 100 pounds of paper should contain about $6\frac{1}{4}$ pounds of water.

Every fiber in a piece of paper is a hollow tube of cellulose that is hygroscopic; i.e., it will take and give up moisture. As the hollow cylinders attract moisture they swell in diameter, but very little in length. That is one reason why we experience stretch of paper, as a change in dimension occurs across the grain to a marked degree and imperceptibly with the grain.

In order to obtain qualities of squareness and proper grain there are a number of things that the paper manufacturer can do and there are more things that the offset printer can do. To make paper slightly impervious to moisture and also make it resistant to picking, it is sized with rosin soaps, waxes and synthetic materials.

Every sheet of paper has two distinct sides possessing very different characteristics. They are most pronounced in offset printing.

The felt side is the side away from the screen and away from the suction boxes on the paper machine. As paper goes over the suction boxes and wire screens, a vacuum is pulling a certain amount of clay, titanium or other filler away from the bottom side. Thus we have less filler, just as we have less color if dyes are used, on the wire side.

In addition, the felt side will be harder sized than the wire side. Because of the wire marks, a larger area of paper is exposed to the air on the wire side and it is more sensitive to moisture in the air or on the blanket. Uniform sizing is important!

Another control for offset papers is their proper conditioning. If we need an ultimate 6½ percent moisture content, paper can be run to about 6¾ percent because paper stock doesn't give nearly as much trouble when it is losing moisture as when it is taking it on.

The ideal way of conditioning stock is to run it to a given moisture content, say five percent, then hang it up in a room, like loft drying, which many lithographers do, and condition it to seven percent moisture content. As it takes on the additional moisture, the stresses, built into it in the course of the running under tension through the paper machine, will be relaxed. Then when it is dropped back to the



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SCALE SHOWN FULL SIZE

This new Paper Hygroscope indicates the difference, in terms of relative humidity, between the pressroom air and the paper stock. Developed by CAMBRIDGE in collaboration with the Lithographic Technical Foundation, this instrument is accurate, quick-acting, rugged . . . so simple to use, that it will be used!

The Cambridge Moisture Indicator, also available, has the additional feature of indicating the actual relative humidity of the room atmosphere or that of the paper.

Send for Bulletin M 353

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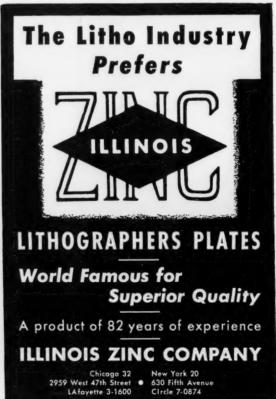
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correct moisture content, we have a sheet that is very stable. Mills are manufacturing offset papers more and more to controlled moisture content. It is important, when a load of paper comes to the plant, to leave it in its waterproof wrapper until the temperature throughout the load rises to room temperature.

Tagboard usually has enough sizing in it and enough uniformity of surface so that it will handle well in smaller sizes. This applies, as well, to writing and index bristols. Manilas and krafts almost always have ample sizing so that they can be handled successfully.

Coated papers used to be a problem in that printing by offset resulted in constant picking, curl and alkaline reaction. Today, most papermakers have cured many of these difficulties. Coated one side has been printed longer than coated two sides and is used largely for label paper. Within the last three or four years we have seen the development of machinecoated papers which are very satisfactory for offset.

Almost all cover papers are well enough sized that they will print in offset. We have one field of paper which is known as offset book paper, with general characteristics of an English finish; that is, with a fiber that is not too long, a good filler and proper sizing. In other words, a paper that is made to fit the requirements discussed here.

We have in offset printing an advantage that we don't have in any other process. We have a blanket which, within fairly wide limits, will conform to the surface of the stock. We can print very fine halftones and very fine line work on antique finishes, on deeply embossed covers, etc., and still lay a halftone right on the surface.*

MAINTENANCE

(Continued from Page 53)

formance is measured against predicted performance.

A careful study was made of repair costs of each type of machine for 10 years and the average for that period was established as a standard. Except for changes in materials and labor costs, he said, these rates have been in use for 14 years.

"At times this cost system has challenged us greatly," he interjected, "but, after working with it so long, we believe it is the best method of controlling our maintenance expenditures."

The department's efficiency, he went on, is figured by comparing actual time spent on each maintenance job with the estimated time allowed by foreman or supervisor. Results, he maintained, clearly indicate that the overall estimating is quite accurate. He also described how manpower is distributed to handle scheduled and emergency work and still keep maintenance costs down. The capacity of each craft and the ratio between the volume of work for the two classes, he advised, must be reviewed as often as every two months.

Expense Varies

"We have often challenged ourselves as to whether we were doing our maintenance work at a cost comparable to other similar companies," Mr. Leach said. "We have heard that some others spend five percent on maintenance and still others as much as 20 percent. It is our conclusion that no two factories are alike and cannot be compared directly. With this, outstanding industrial engineers agree. Each accounting and each control system contains elements thought essential to the respective maintenance costs. But these elements vary and make comparisons impossible."

Concluding, he displayed charts showing that from 1947 to 1953 the Dennison cost control system had lowered building maintenance costs from \$56,000 to \$52,000 and that machine repair expenditures had dropped from \$240,000 to \$210,000 a year. Cost per productive hour for the entire plant, he added, had steadily gone down, from 33.8 cents in 1947 to 27.2 cents in 1953. All figures, he said, reflect the index which the factory's own accountants developed for correcting inflationary effects of increasing hourly wages and increased materials costs.*

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abeth, N. J., A.I.F. Mann Model L-240A.

Press of Fremont Payne, New York, A.

T.F. Little Giant #6; The Cromwell

Printery, Inc., Albany, N. Y., two A.T.F.

Chief 22's; Devon Press, Inc., New York,

A.T.F. Chief "29".

National Printing Co., Union, N. J., A. T.F. Camera Pkge. CR.; Horan Engraving Co., Inc., New York, A.T.F. Camera; Fed Co., Inc., New York, A.T.F. Camera; Federal Business Products, New York, A.T.F. Chief "20"; Laurriet Printing Co., Inc., New York, A.T.F. Chief "22"; Sheldon Press, New York, A.T.F. Chief "22"; Sheldon Press, New York, A.T.F. Chief "22", Stevenson and Smith, Inc., Newark, N. J., A.T.F. Model #6 Little Giants; American Colortype Co., Clifton, N. J., A.T.F. Pkge. Camera BR.; Reliable Offset Co., Inc., New York, A.T.F. Chief "22".

Alumni Offset, Inc., New York, A.T.F. Mann L-236 offset press: United Printing

Mann L-236 offset press; United Printing Service, Inc., New Haven, Conn., A.T.F. Camera No. 241 Pkg. BR; Tribune Press, Suffern, N. Y., A.T.F. Model No. 6 Little Giant letterpress; Offsetone Press, Inc., New York, A.T.F. Chief "29" offset press; Sanmark Press, Inc., New York, A.T.F. Chief "29" offset press; Koppel Photo Engraving Company, Hawthorne, N.J., A.T.F. Chief "29" Offset Press; Quad Offset Corp., New York, A.T.F. Mann L-128A offset Press; Lasky Company, Inc., Newark, N. J., A.T.F. Chief "20" offset press; Ropp Press, Brooklyn, A.T.F. Chief "22" offset press; Dover Publications, Inc., New York, A.T.F. Chief "20" offset press; Business Photo Reproduction, New York A.T.F. Mann L-236 offset press.

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Acco Products Corp., Ogdensburg, N. Y., 52" Lawson heavy duty automatic hydraulic clamp cutter, series "V2"; Crown-Zellerbach Corp., Carthage, N.Y., 52" Lawson heavy duty automatic hydraulic clamp cutter, series "V2"; The MeBee Co., St. Louis, Mo., 52" Lawson electronic spacer Louis, Mo., 52" Lawson electronic spacer cutter, series "V2"; American Bank Note Co., New York, 52" Lawson electronic space cutter, series "V2"; Robert Rose Bindery, New York, 52" Lawson electronic spacer cutter, series "V2"; Clinton Paper Co., Lock Haven, Pa., 52" Lawson electronic spacer cutter, series "V2".

J. W. Clement, Buffalo, N.Y., Lawson model 52-T-76 electronic spacer cutter;

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on Rapid automatic 3-knife trimmer; Brown & McEwan, Newark, N. J., Lawson rapid automatic 3-knife trimmer; A. L. rapid automatic 3-knite trimmer; A. L. Garber Co., Ashland, O., Lawson heavy duty multiple spindle drilling machine; Rockwell Barnes, Inc., Chicago, Lawson heavy duty multiple spindle drilling machine. chine; Comfort & Co., New York, Lawson heavy duty multiple spindle drilling ma-

Harris-Seybold Co.

Kerr Printers & Stationers, Los Angeles, Seybold 50" Series Sixty motor-driven back gauge cutter, Model P-50; Getz Brothers & Co., San Francisco, Harris 35x45" twocolor offset press, Model 245A; New England Prtg. & Litho Co., Bridgeport, Conn., Seybold 44" Series Sixty motor-driven back gauge cutter, Model P-40; Modern Prtg. & Lithography, Inc., Norwalk, Connecticut, Seybold 50" Series Sixty automatic spacer cutter, Model S-50; Stant Lithograph Service, Washington, D. C., Harris 22x34" two-color offset press, Model 234; Bradenton Herald Co., Bradenton, Fla., Harris 17-22" single-color offset press, Model 122A; American Litho Co., Inc., Atlanta, Ga., Seybold 50" Series Sixty automatic spacer cutter, Model S-50; American Decalcomania Co., Chicago, Seybold 64" Series Sixty automatic spacer cutter, Model S-64; Lemarge Company, Chicago, Seybold 50" Series Sixty automatic spacer cutter, Model S-50; Moser Paper Co., Chicago, Harris two-color envelope press, Model TRA; Veritone Co., Chicago, Harris 22x34" two-color offset press, Model 234; Howard Company, Inc., Peoria, Ill., Harris 22x34" two-color offset press, Model 234.

Indianapolis Blue Ptg. & Litho Co., Indianapolis, Harris 17x22" single-color offset press, Model 122A; J. W. Cockrum Printing Co., Oakland City, Ind., Seybold 34" Dynaclamp, full automatic clamp cutter, Model CHB; Moore-Langen Ptg. & Publ. Co., Terre Haute, Ind., Seybold 44" Series Sixty motor-driven back gauge cutter, Model P-44; Kentucky Lithographing Co., Louisville, Kentucky, Seybold 40' Series Sixty motor-driven back gauge cutter, Model P-40; Ross Lithograph Co., New Orleans, Louisiana, Harris 21-28" single-color offset press, Model 128A; Knowlton & McLeary Co., Parmington, Me., Harris 17-22" single-color offset press, Model 122A; Colonial Press, Attleboro, Mass., Harris 17-22" single-color offset Model 122A; Cupples-Hesse Corp. of Michigan, Inc., Detroit, Harris twocolor envelope press, Model TRA; Kohler & Son, Inc., St. Louis, Miss., Harris 22x34" two-color offset press, Model 234.

Jersey City Printing Co., Jersey City, Harris 52x76" four-color offset press, Model 476; Wesley & Winter, Inc., Linden, N.J., Seybold 44" Series Sixty motordriven back gauge cutter, Model P-44; Kenney Press, Newark, Harris 17x22" single-color offset press, Model 122A; Boro Offset Corp., Brooklyn, Seybold Hydrodrill, multiple spindle drilling machine, Model HFA; Empire Lithographing Co., New York, Harris 52x76" four-color offset press, Model 476; Case-Hoyt Corp., Rochester, N. Y., Harris 42x58" two-color offset press.

Model 258; Maqua Company, Schenectady, N. Y., Harris 42x58" two-color offset press, Model 258; Herald Press, Inc., Charlotte, N. C., Harris 22x34" two-color offset press, Model 234; Merchants Industries, Inc., Bellefontaine, O., Harris two-color envelope press, Model TRA; Gibson Art Co., Cincinnati, Harris 17x22" single-color offset press, Model 122A; Cincinnati Cordage & Paper Co., Columbus, O., Seybold 50" Series Sixty motor-driven back gauge cutter, Model P-50.

Crown Paper Board Co., Inc., Phila-delphia, Seybold 64" Series Sixty automa-tic spacer mill trimmer, Model MS-64; Provence-Jarrard Co., Greenville, S. C., Seybold 44" Series Sixty automatic spacer cutter, Model S-44; Southern Central Co.. Memphis, Tenn., Harris two-color envelope press, Model TRA; Otey Envelope, Inc., Dallas, Texas, Harris two-color envelope press, Model TRA; Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis., Seybold Precision 94" automatic spacer mill trimmer, Model MS-94; Fey Publishing Co., Wisconsin Rapids, Wis., Harris 21-28" single-color offset press, Model 128A.

Canada: Wright Lithographing Co., Ltd., London, Ontario, Harris 35x45" two-color offset press, Model 245A; Commercial Print-Craft, Ltd., Woodstock, Ontario, Harris 22x34" two-color offset press, Model 234; T. B. Little Papers, Ltd., Montreal, Quebec, Seybold 44" Series Sixty automatic spacer cutter, Model S-44; National Litho & Printing Co., Montreal, Quebec, Seybold 40" Series Sixty motor-driven back gauge cutter, Model P-40.

First Prismatics in Cincinnati

Tru-Color Offset Service Co., Cincinnati, has installed two 36-inch prismatic light cameras, manufactured by Huebner Laboratory, Mamaroneck, N. Y. These are said to he the first such cameras placed in operation in the Cincinnati area.

Friese Adds New Equipment

Friese Litho Plate Service, Chicago, completed installation last month of a new Lanston M H-6 photocomposer to handle 76-inch plates. A new Graf-Arc lamp was added for the vacuum frame, and improved stripping tables were installed. Rearrangement of the floor plan now permits straight line production operations.

New Artist Guild Directory

Artists Guild of Chicago released its 1955 edition of its directory last month; a 94-page booklet listing its 700 members, their services and specialties, with a cross reference file for location of commercial artists, photographers and designers.



All classified advertisements are charged for at the rate of ten cents per word, \$2.00 minimum, except those of individuals seeking word, \$1.00 minimum. One column ads in a ruled box, \$7.50 per column inch. Address replies to Classified Advertisements with Box Number, care of Modern Lithography, Box 31, Caldwell, N. J.

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PLATEMAKER, STRIPPER AND CAMERAMAN: For quality two and three color work. Ideal working conditions in modern, air conditioned department. Steady work with overtime. Located in Ohio, Address Box 669, c/o Modern Lithography.

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SALESMAN-for paper and foil coatings, large Nationally known manufacturer is expanding paper coatings division and has opening for salesman in Midwest. Prefer man with knowledge vent type materials. Excellent opportunity to expand established business. Salary and expenses to start. Address letter out-lining qualifications to Box 676 c/o Modern Lithography.

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PRODUCTION MANAGER-College graduate, age 34, experienced in estimating, production planning and control, and other operations in a medium size combination plant. Interested in a position with possibilities of advancement in a progressive printing firm. Prefers Rocky Mountain states or west. Address Box 667, c/o Modern Lithography.

TECHNICAL SPECIALIST: With outstanding record of achievement as technical advisor. A unique background of practical experience in lithographic production, trouble-shooting and tradetraining. Interested in responsible position with progressive plant involving technical supervision and in-plant training. Would also consider commensurate position with supplier or equipment manufacturer. Address Box 672, c/o Modern Lithography.

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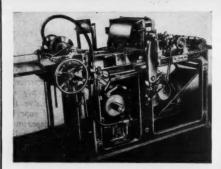
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FOR SALE - Offset Plate Racks for plates from 10 x 14 to 45 x 57 Negative and art storage Cabinets. Write for new Catalog, Foster Mfg. Co., 210 N. Broad Street, Phila., 2, Pa.

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LENS --- Carl Zeiss Jena 30 inch Apo-Tessar, waterhouse slot, in almost new condition-serial #950 588. Finest lens available. Make us offer. Address box 680, c/o Modern Lithography.

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TECH. BRIEFS

(Continued from Page 82)

tation number, basis weight, opacity, etc. At the same time different factors connected with the print have been determined as ink transfer number, blackness, print-through, etc. The quality of the prints has been judged by several persons, and through calculation of the correlation coefficients the existing relationships between the quality of the print and the properties of the paper have been investigated and discussed. Among the properties investigated only the porosity, the ink receptivity and the opacity of the paper seem to influence the printing result.

SURFACING SIZING OF BOARD WITH CARBOXYMETHYLCELLULOSE (CMC). I. Olsson and L. Pihl. Grafiska Forskningslaboratoriet 35, November, 1954, pages 16-20 (5 pages) (in Swedish). An investigation shows the influence of the amount of carboxymethylcellulose and its viscosity on the oil absorption of board. The board is surface-sized with water solutions of different concentrations and two kinds of cellulose gum are used. The influence of the gum depends on the viscosity and the amount of the gum. A low oil penetration is obtained by a 3-4% solution of a high viscosity gum.

WHAT TO EXPECT FROM YOUR INKS. Earl Hickox. National Lithographer 62, No. 2, February, 1955, pages 75-77 (3 pages). Factors that are important to correct formulation and use of metal decorating inks are briefly discussed. Such things as number of prints, times and temperatures of bakes, sizing or coating to be printed over, and kind of a varnish finish should be considered. A brief discussion of such control instruments as the "Muller", weatherometer, and inkometer



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Lithography-General

OPERATING LARGE HARRIS PRESSES. Part 7. Roy Tyler. Harris Impressions 15, No. 1, January-February, 1955, pages 1-5 (6 pages). Describes the new ink roller system, how to set and adjust the rollers from the ductor to the form roller.

Adjustable Gearing. U.S. Patent 2,694,941. W. R. Spiller. Official Gasette 688, No. 4, November 23, 1954, page 711. 1. In a printing machine of the character described, two coaxial elements, namely a cylinder and a gear, said elements being capable of limited relative oscillation while rotating, power means for driving one of said elements, a fixed cam surrounding the axis of said elements, a lever pivotally mounted on one of said elements, a follower carried by said lever running on said fixed cam, an arcuate cam track spaced from the lever pivot and mounted on the second element, and a second follower carried by said lever running on said cam track, said cam track being adjustable to a position crossing the arc of movement of said second follower, whereby the speed of rotation of one of said elements is varied positively and negatively during each cycle by the oscillation of said lever due to the action of said fixed cam.

PRESSURE SENSITIVES

(Continued from Page 39)

production department on the value of running pressure sensitive papers.

Lithography was the number one method of printing on pressure sensitive materials when the business began to mushroom about 12-15 years ago. However, due to a steep rise in production of pressure sensitive tapes, which are printed mostly by other methods, lithography no longer accounts for the major portion of printing in this field. Some lag may be due to an initial reluctance by the lithographer to enter into a field with unknown quantities when business in other lines is good. The discovery that printing on "psm" offers no difficulties, and the exciting possibilities shown in the past six to eight years, especially in the point-of-sale area, may well kindle new fires within the creative lithographer.

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LITHOGRAPHY teamed up with the silk screen process to produce a memento which Lawter Chemicals, Inc., Chicago, is sending patrons this month to mark the 15th anniversary of the firm's founding. Appearing on a heavy 15 x 18 inch card is a reproduction of Old Glory, printed in Lawter fluorescent inks by Screen Flock Industries, Chicago. Along the lower edge of the piece appears the recently revised oath of allegiance to the flag, lithographed by Carl Gorr Printing Co.

Established April 1, 1940, Lawter Chemicals has expanded greatly in the past 15 years but it is still almost impossible to keep production abreast of demand for the alkyd resins and fluorescent inks it produces. The inks are being supplied to printers throughout the U. S. and Canada and in 27 overseas countries, while the resins are used for quickset and other types of varnishes used by lithographers.

In March a plant was opened at Newark, N. J., to supplement the main factory in Chicago and better serve printers in twelve east coast states. Regional warehouses have been opened in four locations to improve distribution service but overall facilities are still inadequate, Dan Terra, president, said. He intimated to Modern Lithography that further expansion is contemplated in both manufacturing and warehousing services.

Use of Lawter fluorescent inks for lithographic printing, Mr. Terra said, has lagged because the difficult problems here are not all solved. "We're getting closer," he declared, "and, as improvements are made, you'll see fluorescent inks more and more in offset printing."

Armstrong Cork Co. of Lancaster, Pa., if you're interested, is a fine example of a "tail wagging the dog" business. At the Canners' convention in Chicago last month, Robert M. Knupp, assistant manager of the cap division, put it that way as he related in an interview how the company originally manufactured nothing but cork bottle stoppers and used the waste material from this operation to make linoleum floor coverings as a by-product. This started in a small way but today Armstrong's linoleum products are known world wide.

The closure business, however, has not been discontinued, just readjusted to meet new conditions. About 1920 a shift was made from cork to metal decorated closures and in 1933 production of plastic closures also was begun.

All are lithographed on a battery of modern metal decorating presses.



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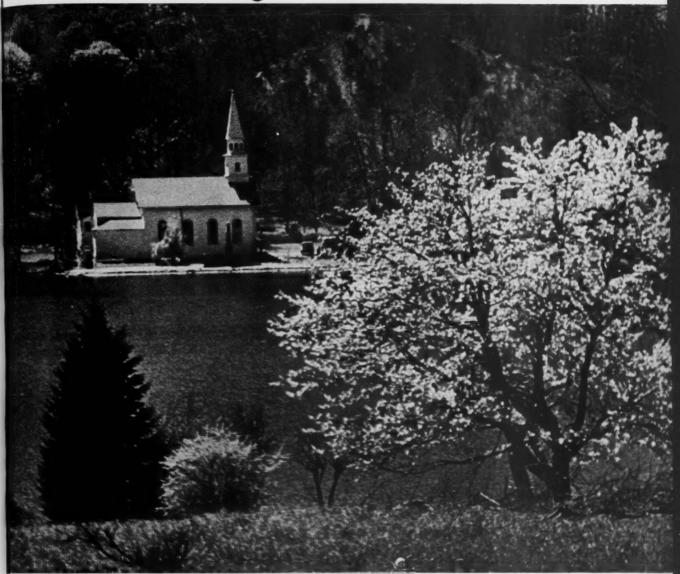
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